

KV-2056EC

RM-635

SERVICE MANUAL

AEP Model
Chassis No. SCC-507A-A



August, 1983

XE-2 CHASSIS

SPECIFICATIONS

Television system	CCIR TV standards (system B, G and H)	Audio output connector (5-pin DIN)
Color system	PAL	Recording output: 1 mVrms/kilohm
Zweiton system	Two-carrier system	Line output: variable, 0-2 Vrms (max.)
Channel coverage	VHF channels E2-U20	impedance less than 1 kilohm
	UHF channels E21-E68	External speaker terminals (2-pin DIN)
Programing system	30 programs	For 4-8 ohm speakers
	Automatic programing digital tuning	Headphones jack (stereo phone jack)
Picture tube	Approx. 52 cm (20 inches)	Power requirements 220-240 V ac, 50 Hz
	100-degree deflection	Power consumption 105 W (Approx. 11 W in standby condition)
	Trinitron system	Dimensions Approx. 522 x 502 x 513 mm (w/h/d)
Antenna	(Approx. 49 cm screen measured diagonally)	Weight Approx. 31 kg (68 lb 6 oz)
	75-ohm standard antenna socket	Accessory supplied Remote Commander RM-635
	(DIN45325/IEC169-2)	
Audio output	5 W + 5 W (with 10% harmonic distortion)	
Inputs	AV connector (6-pin DIN)	
	Video input: 1.0V p-p, impedance 75 ohms,	
	sync negative	
	Audio input: 0.1-2 Vrms	
	impedance more than 10 kilohms	
Outputs	AV connector (6-pin DIN)	
	Video output: 1.0 V p-p, impedance	
	75 ohms, sync negative	
	Audio output: 0.1-2 Vrms	
	impedance less than 1 kilohm	

Optional accessories

OPK-102 SECAM adaptor
VMC-366 video monitor cable (6-pin to 6-pin)
VMC-368 video monitor cable (6-pin to 8-pin)
RK-140 connecting cord (6-pin to BNC and phono)

Design and specifications are subject to change without notice.



TRINITRON® COLOR TV
TELETEXT
SONY®

CTV

SAFETY-RELATED COMPONENT WARNING !!


COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

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SECTION 1 GENERAL

1-1. WARNING

To prevent fire or shock hazard, do not expose the set to rain or moisture.

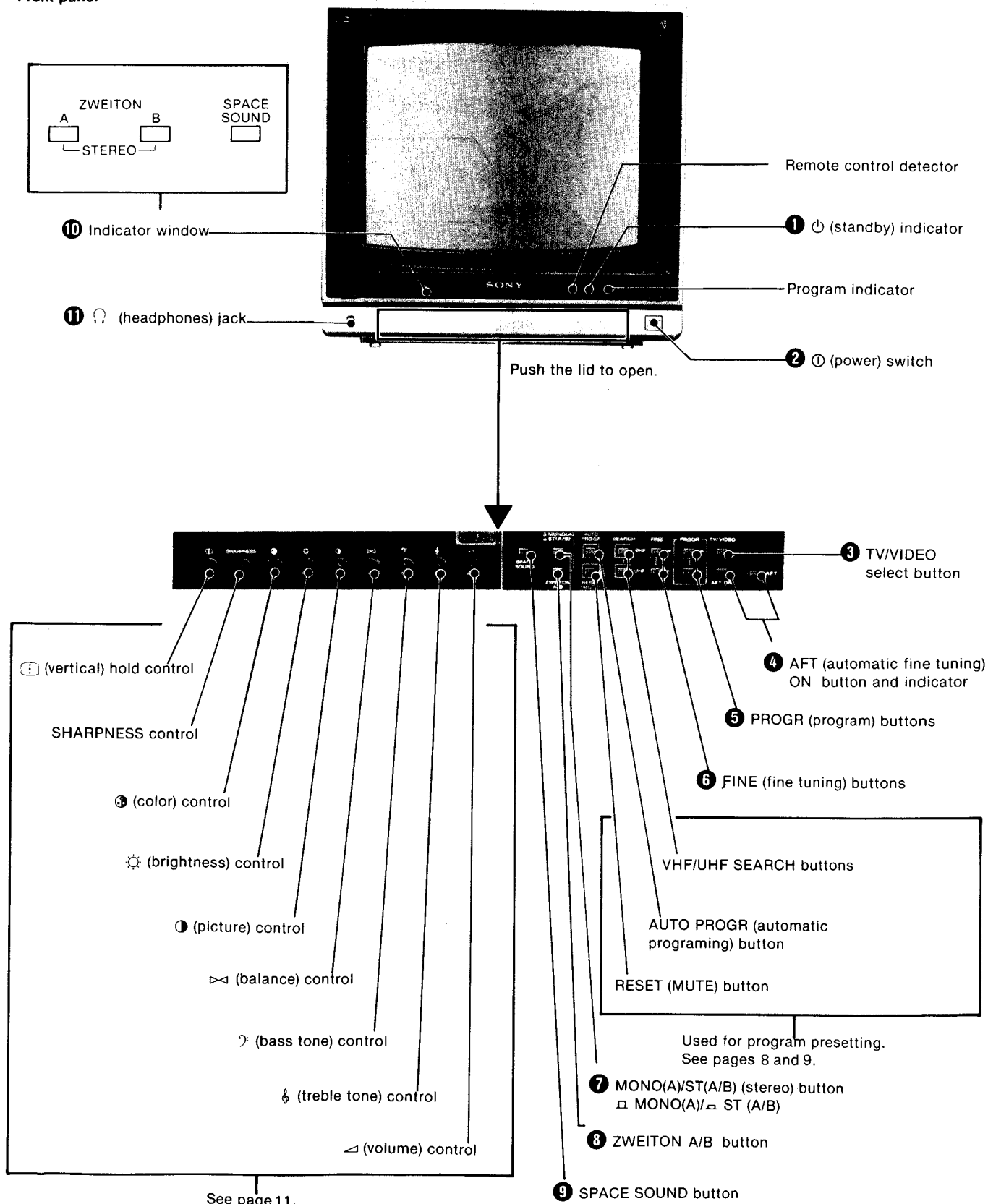
Dangerously high voltages are present inside the set. Do not open the cabinet. Refer servicing to qualified personnel only.

1-2. FEATURES

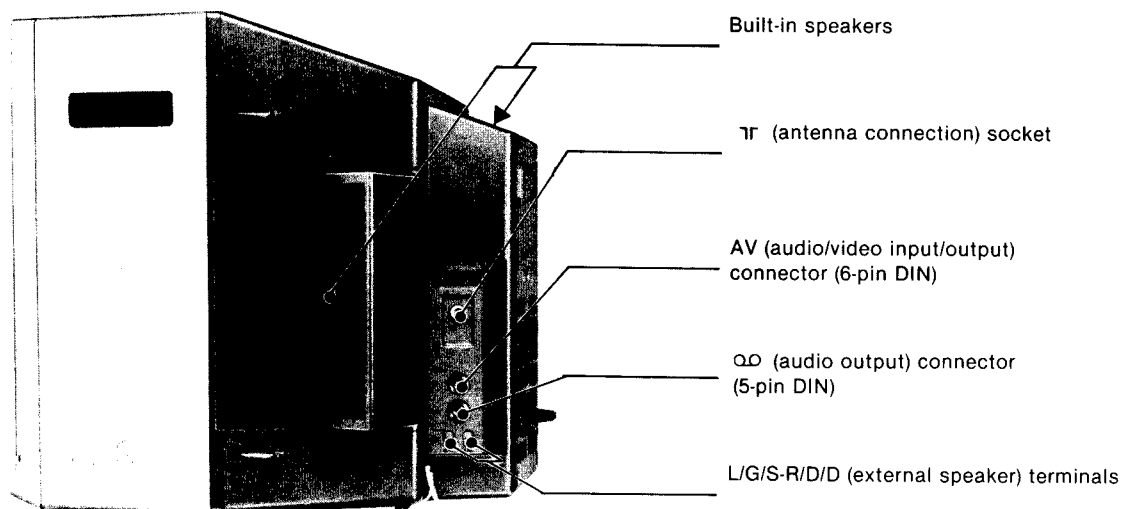
- Remote control color television with a multi-function Remote Commander
- Reception of all VHF and UHF channels based on CCIR TV standards and PAL color system
- Easy and stable tuning of up to 30 programs
- Two convenient systems of program presetting: automatic programming and manual programming
- Built-in Zweiton decoder for stereo sound and dual-sound program reception in West Germany
- Energy-saving quick start picture system
- Smoked glass over the screen for a glare-free picture with optimum contrast
- An optional OPK-103 teletext adaptor can be installed in the KV-2052EC. (For installation, consult your nearest Sony dealer.)
- SECAM color signals from East Germany can be received by installing an optional OPK-102 SECAM adaptor. (For installation, consult your nearest Sony dealer.)

1-3. LOCATION AND FUNCTION OF CONTROLS

Front panel



Rear panel



❶ ⏻ (standby) indicator

Lights up when the TV is turned off with the Remote Commander. When any of the buttons on the Remote Commander is pressed, this lamp blinks.

❷ ⏻ (power) switch

Press to turn the TV on. Press again to turn it off. When this switch is turned off, you cannot turn the power on with the supplied Remote Commander.

❸ TV/VIDEO select button

When playing back a video tape recorder without a 6-pin DIN connector, press this button so that "V" lights in the program indicator. When playing back a recorder equipped with a 6-pin DIN connector, the video mode is automatically selected.

❹ AFT (automatic fine tuning) ON button and indicator

The AFT circuit activates automatically after the stations are tuned and memorized in automatic and manual programing. The indicator will illuminate. In case you want to restore the AFT on the channel which has been fine-tuned manually with the FINE buttons press the AFT ON button.

❺ PROGR (program) buttons

Press either + or - to select a preset program from positions 1 through 30. The selected program number will appear on the program indicator. Note that program 30 is "0" on the program indicator. Press + for higher-numbered programs, and - for lower-numbered programs. Programs will be changed continuously in sequence. If there is annoying noise at an unused program position, eliminate it by pressing the RESET (MUTE) button.

❻ FINE (fine tuning) buttons

Keep either + or - depressed to get a clear picture for each unsatisfactory channel. The automatic fine-tuning circuit will be automatically deactivated on the channel fine-tuned with these buttons.

❽ MONO(A)/ST(A/B) (stereo) button ▢ MONO(A) ▢ ST(A/B)

Normally set this button to the depressed ST(A/B) position. Stereo programs and dual-sound program can be received. When this button is not depressed, MONO(A) position, stereo programs will be monaural and only channel A of a dual-sound program will be received.

❾ ZWEITON A/B button

When the ST(A/B) is pushed in, dual-sound programs can be received. Select the language to be listened to — A or B — by pressing the ZWEITON A/B button.

❿ SPACE SOUND button

Press to get special acoustic effects (for example, more presence). The SPACE SOUND indicator will illuminate. To disengage, press it again.

⓫ Indicator window

ⓐ SPACE SOUND indicator

ⓑ ZWEITON STEREO indicators

When a dual-sound program is received while the ST(A/B) button is pressed, A or B will light up. When a stereo program is received while the ST(A/B) button is pressed, A and B indicators will light up.

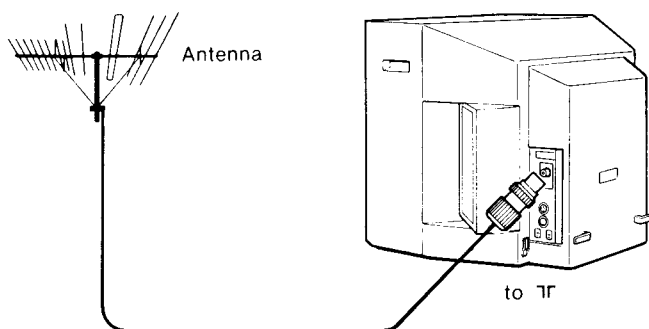
⓬ ⏻ (headphones) jack

Connect headphones here. Speaker sound will be disconnected. If your headphones' plug does not fit the jack, use an optional plug adaptor.

1-4. CONNECTIONS

ANTENNA CONNECTION

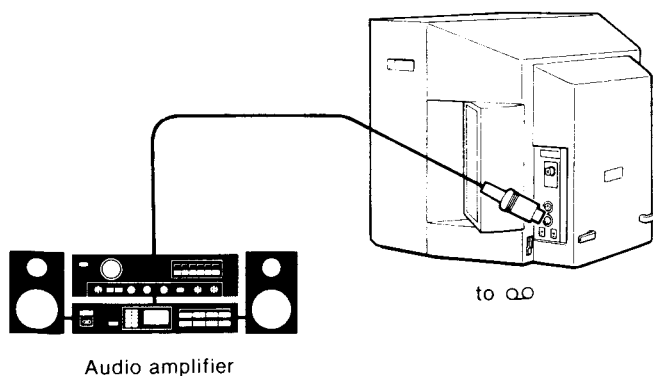
Good picture and sound are obtained when a proper antenna is used. Your TV receiver is equipped with a standard antenna connection socket, which is effective for both VHF and UHF reception. Use a coaxial antenna connection cable equipped with a single plug, and insert the plug into the Γ (antenna connection) socket of your TV.



When a video tape recorder is to be connected to the Γ socket of the TV, connect an antenna to the recorder, as explained in "To enjoy video tape playback".

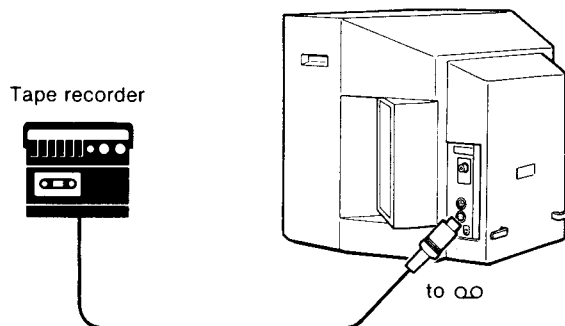
CONNECTION WITH AN AMPLIFIER

If you connect your stereo amplifier to the $\alpha\alpha$ connector (5-pin DIN) using a suitable connecting cord, you can listen to the TV sound from the speakers of your audio system. The sound control settings on the TV and the Remote Commander will be operable.



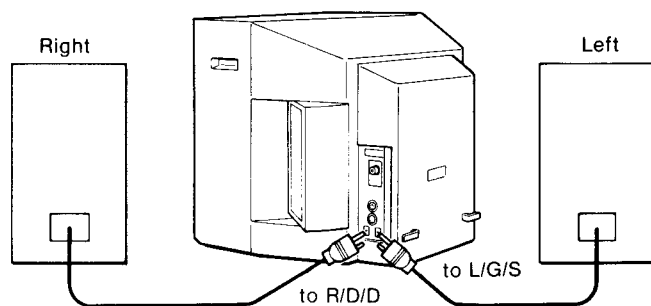
CONNECTION WITH A TAPE RECORDER

If you connect a tape recorder to the $\alpha\alpha$ connector (5-pin DIN) using a suitable connecting cord, you can record the TV sound. In this case, the sound control settings on the TV and the Remote Commander have no effect on the recording.



CONNECTION WITH EXTERNAL SPEAKERS

Connect external speakers to the speaker terminals on the rear of the TV.



For further details, refer to the instructions furnished with the speakers.

Notes

- Keep the speaker system away from the TV, as the magnets in the speakers may affect the TV screen.
- Never connect a speaker system to an amplifier and this TV simultaneously, as this may damage the TV.

1-5. PROGRAM PRESETTING

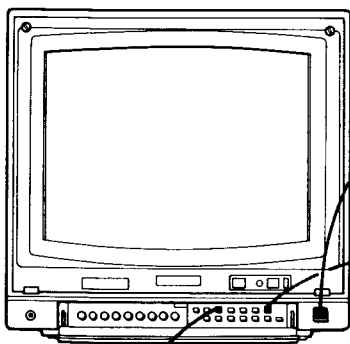
This TV has 30 program positions. Once you preset the channels broadcast in your area, program selection is simply made by pressing the PROGR buttons on the TV or the hand-held Remote Commander.

Preset programs by following one of these procedures; automatic programming or manual programming.

AUTOMATIC PROGRAMING

With the automatic programing system, receivable VHF and UHF channels in your area can be preset automatically in numerical sequence; from the lowest frequency VHF channel through the highest UHF channel.

If a channel you wish to preset is not strong enough to be preset with the automatic programing system, use the manual programming.



1

Depress ① to turn on the TV.

2

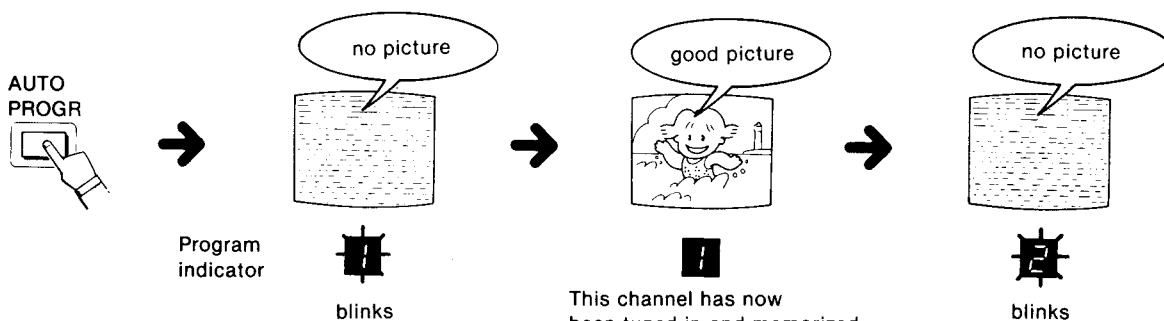
Check that the TV is in the TV mode.
If *PU* lights in the program indicator, press the TV/VIDEO select button.

3

Press AUTO PROGR.

Automatic programming will begin.

The first channel found will be memorized on program position 1, the second on position 2, and so on.



This tuning-memorizing sequence will be repeated for each channel in your area. When no more channels can be found, automatic programming will stop, and the program preset on the first program position will appear on the TV screen. The number "1" will light (not blink) on the program indicator.

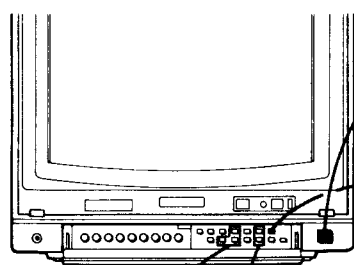
After presetting has been completed, press the PROGR buttons to check the results of the automatic programming, referring to your local TV listings.

To cancel automatic programming while it is in progress, press the RESET (MUTE) button or the + or - PROGR button.

MANUAL PROGRAMING

With the manual program search system, the channels you want can be preset in a desired sequence.

Any channel can be set to any program position. Consult your local TV listings to find out the active channels in your area. Make a list of your desired VHF and UHF channels and arrange them in a desired sequence.

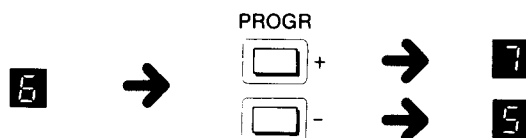


1 Depress ① to turn on the TV.

2 Check that the TV is in the TV mode.
If **TV** lights in the program indicator, press the TV/VIDEO select button.

3 Press the + or - **PROGR** button to select the number of the program position to which the channel is to be preset.

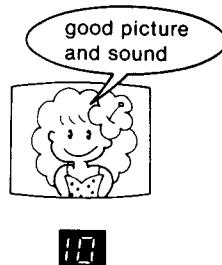
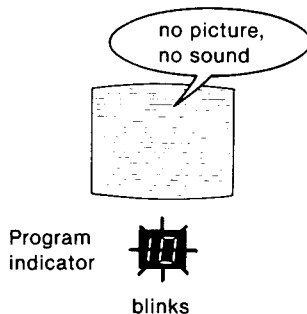
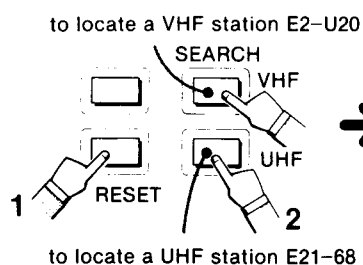
for higher-numbered program position



The number selected appears in the program indicator.

for lower-numbered program position

4 Press the **RESET (MUTE)** button and then the **VHF or UHF SEARCH** button.
The first channel found will be tuned. Every time you press the **SEARCH** button, a higher-numbered channel is located, so press the button until the desired station is received.



• In strong signal areas, tuning may sometimes stop between channels. If this happens, just press the **VHF or UHF SEARCH** button again.

Repeat steps **3** and **4** for all the desired channels.

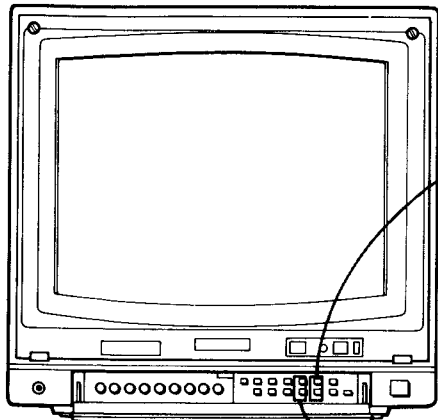
RESET (MUTE) button

If this button is pressed, the set will be automatically tuned to a frequency below channel E2.

If you want to skip a particular program position when scanning with the **PROGR** buttons on the Remote Commander, press the **RESET (MUTE)** button when the indicator shows that position.

FINE-TUNING OF A WEAK STATION

If you cannot obtain a clear picture on a particular channel, fine-tune that station manually with the FINE buttons.



1

Select the channel to be fine-tuned with the **PROGR** buttons.

2

Keep the **+** or **-** **FINE** button pressed until a clear picture is obtained.

When either of the **FINE** buttons is pressed, the **AFT** (automatic fine tuning) on the selected channel is deactivated and the **AFT** indicator turns off. To view the fine-tuned station, keep the **AFT** deactivated (do not press the **AFT ON** button).

When other memorized stations are selected, the **AFT** activates automatically.

1-6. BASIC OPERATION ON THE PANEL

1 Depress ① to turn on the TV.

2 Select the desired TV program.

for higher-numbered programs

for lower-numbered programs

PROGR

If the picture rolls vertically



3 Adjust the picture condition.

for less sharpness



for more sharpness

for less color



for more color

for less brightness



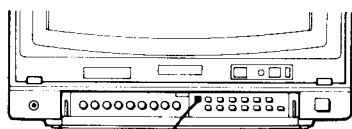
for more brightness

to decrease the picture contrast



to increase the picture contrast

To get special acoustic effects



SPACE
SOUND

Press.



Press again to disengage it.

4 Adjust the sound condition.

to decrease the volume



to increase the volume

for less treble



for more treble

for less bass





for more bass

to emphasize the left speaker's sound



to emphasize the right speaker's sound

If you use an external Hi-Fi speaker system, you will find that the bass is emphasized with the  control at the center detent position. This is because this TV has a built-in low boost circuit. In this case, turn the  control counterclockwise.


This switch is especially effective when listening to music or a sports program. For instance, when you are listening to a piano concerto, the piano will be clearly heard from the center, and the orchestra, reverberation and applause will be heard as "surround" sounds.

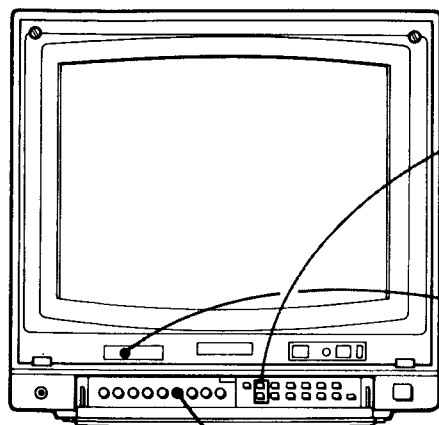
1-7. TO ENJOY STEREO AND DUAL-SOUND PROGRAMS

Check that the MONO(A)/ST(A/B) button is in the depressed ST(A/B) position.

When a stereo program is received, STEREO indicators light up.

The TV automatically operates in the stereo mode when a stereo program is received.

If necessary, adjust the stereo balance with the  control to obtain the optimum stereo effect.



1

□ MONO(A)
□ ST(A/B)
ZWEITON
A/B

Check that the
MONO(A)/ST(A/B) button
is depressed.



2

to increase
the left
channel volume

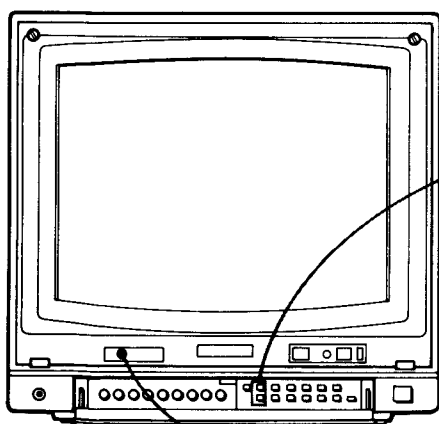


to increase
the right
channel volume

Check that the MONO(A)/ST(A/B) button is in the depressed ST(A/B) position.

When a dual-sound(bilingual) program is received, either A or B indicator lights up.

Select the local language (usually broadcast on channel A) or the original language (usually broadcast on channel B) by pressing the ZWEITON A/B button on the TV or the A/B button on the Remote Commander.

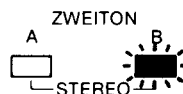


1

□ MONO(A)
□ ST(A/B)
ZWEITON
A/B

Check that the MONO(A)/ST(A/B) button is depressed.

2



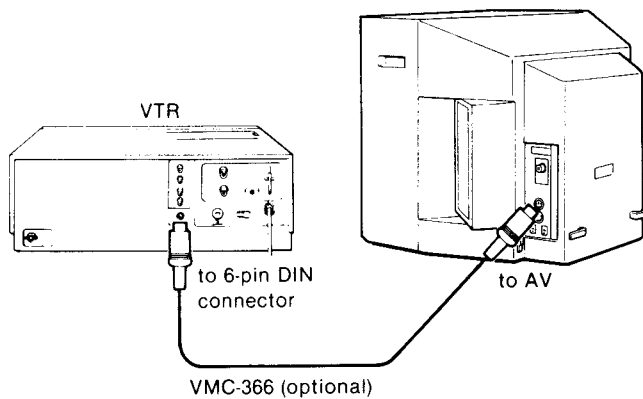
When the ZWEITON A/B button is pressed,
the language A or B to be listened changes.

1-8. TO ENJOY VIDEO TAPE PLAYBACK

USING THE AV CONNECTOR (6-PIN DIN)

With a recorder equipped with a 6-pin DIN connector

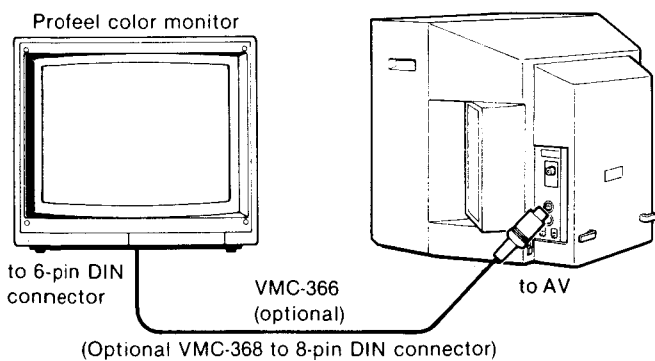
Connection



Operation

Turn on the TV and the recorder. When the recorder is set into the playback mode, the TV will be set into the video mode automatically and the playback picture will appear on the TV screen.

With a color monitor

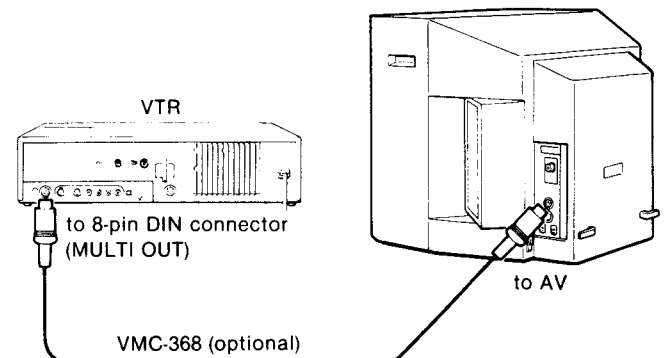


It is possible to view the same TV program on the monitor connected to the AV.

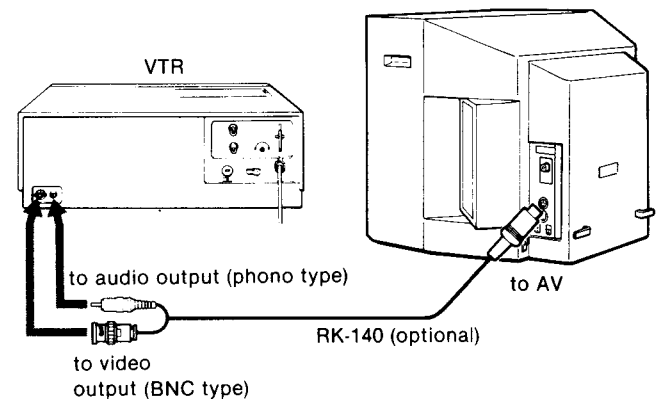
With a recorder without a 6-pin DIN connector

Connection


Example 1:



Example 2:



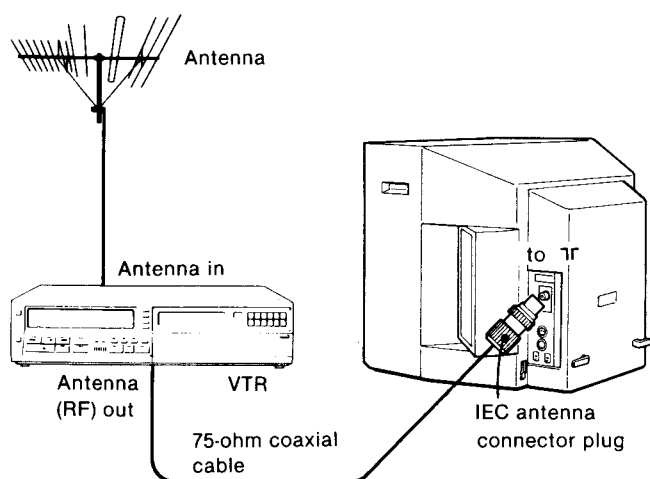
Operation

Turn on the TV and the recorder. Press the TV/VIDEO select button on the TV or the VIDEO button on the Remote Commander so that  lights in the program indicator. The TV is then set into the video mode. Play the tape back.

USING THE ANTENNA CONNECTION SOCKET

With a recorder equipped with an RF modulator

Connection



Keep a VTR away from the TV, if the display or sound is affected.

Operation

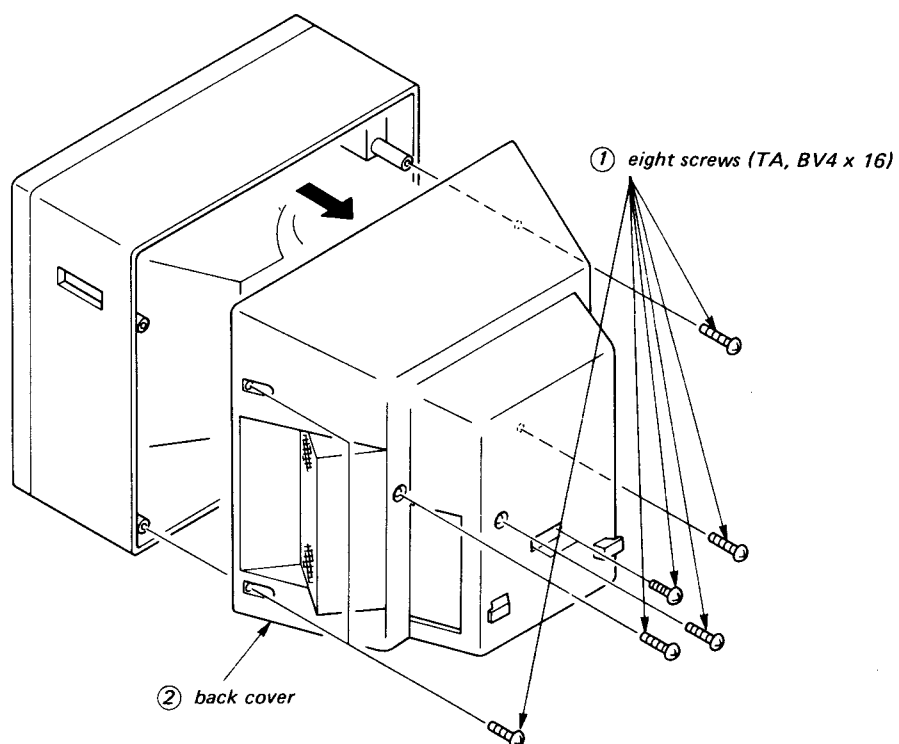
Preset one of the program positions of the TV to the output signal of the recorder as follows.

- 1 Turn on the TV and recorder.
- 2 Be sure that the TV is in the TV mode.
- 3 Set the TEST SIGNAL switch to ON if equipped with your recorder, or apply the output signal of the recorder to the TV by setting the recorder into the playback mode.
- 4 Select the program position to be set for the recorder with the PROGR buttons.
- 5 Push either of the SEARCH buttons. When the recorder output signal is found and memorized, the playback picture of the recorder will appear on the screen.

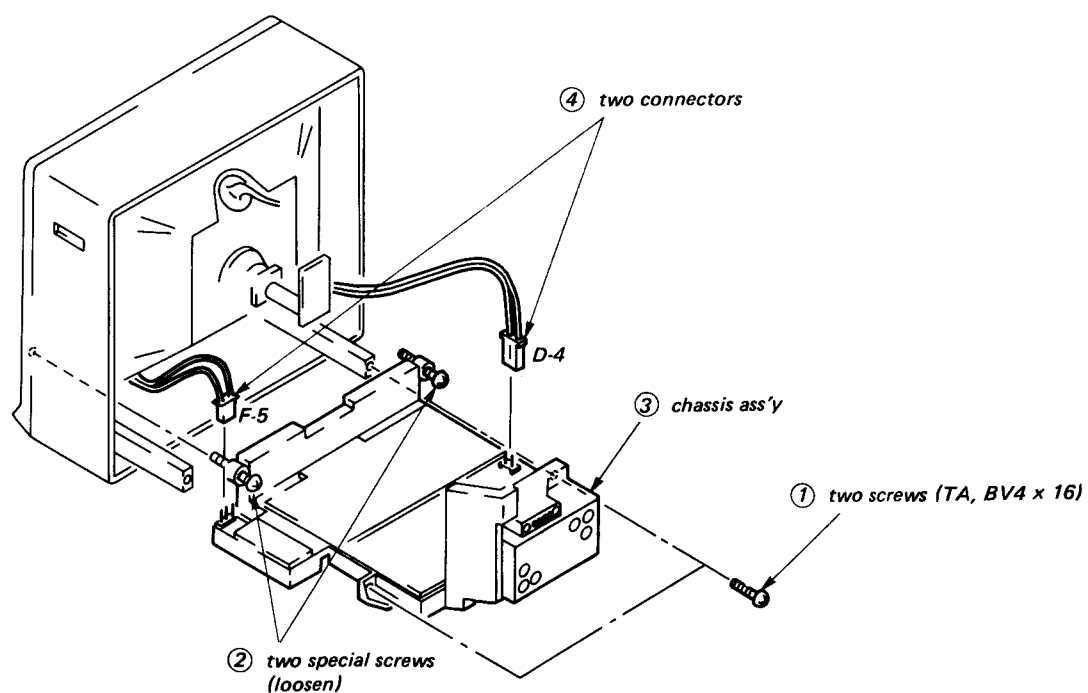
For operation of the recorder, refer to the instruction manual of the recorder.

SECTION 2 DISASSEMBLY AND REPLACEMENT

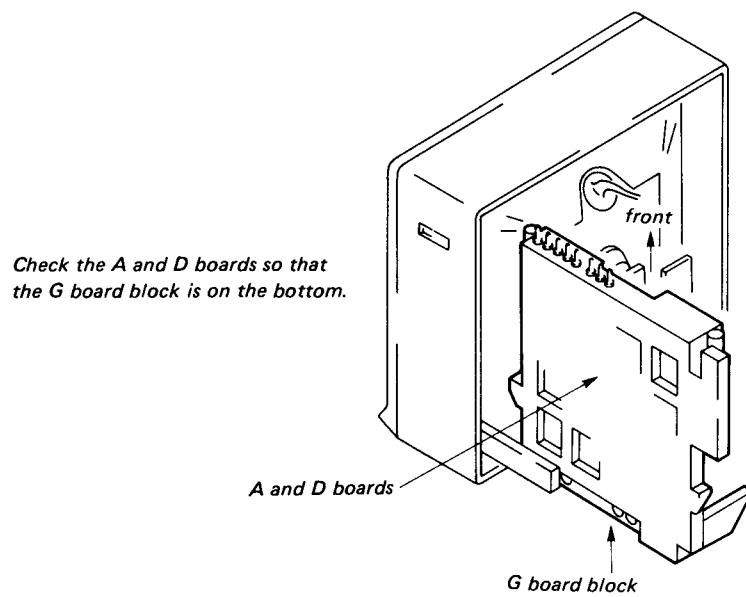
2-1. BACK COVER ASS'Y REMOVAL



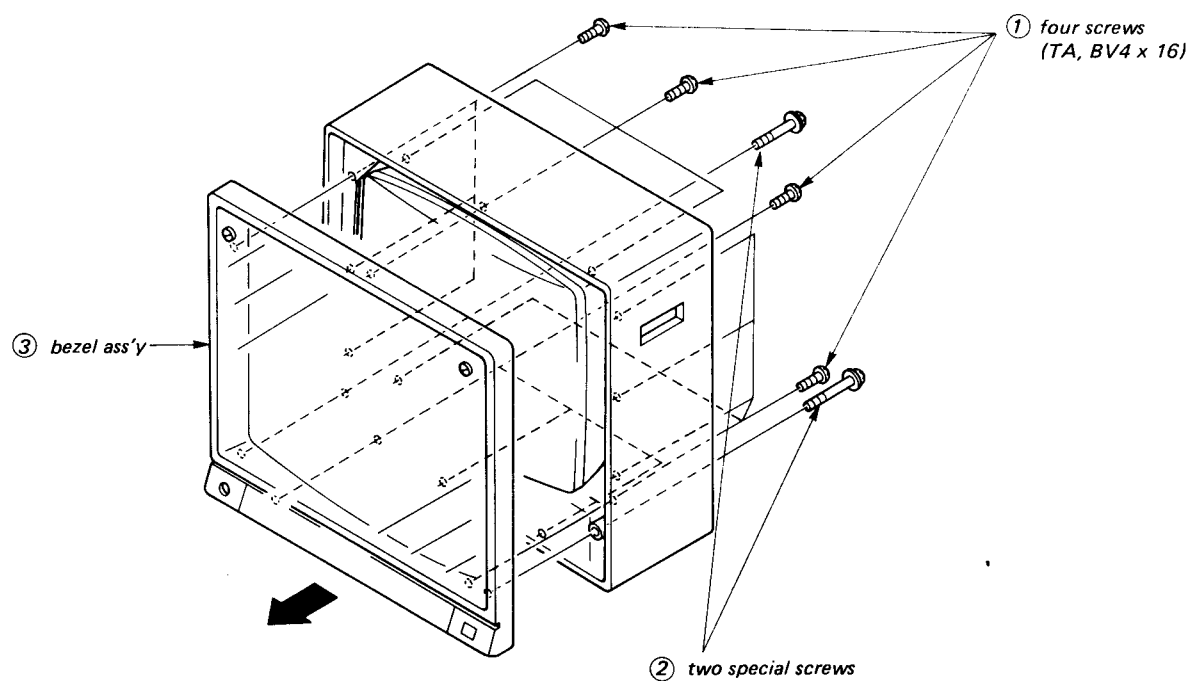
2-2. CHECKING FOR A AND D BOARDS UP (1) (CHASSIS ASS'Y REMOVAL)



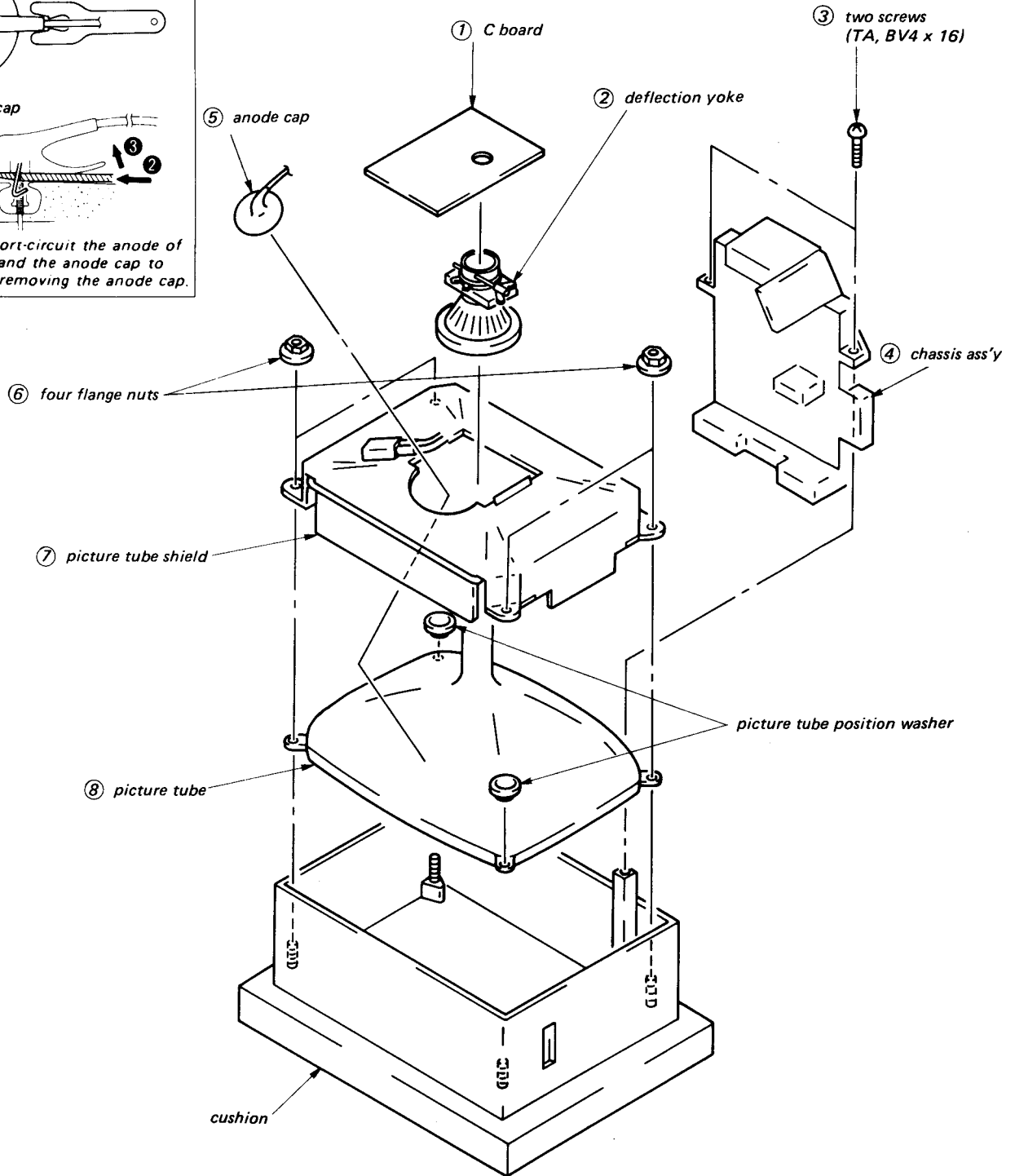
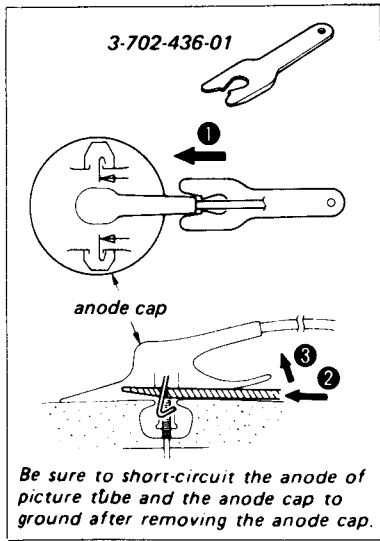
2-3. CHECKING FOR A AND D BOARDS UP (2)



2-4. BEZEL ASS'Y REMOVAL



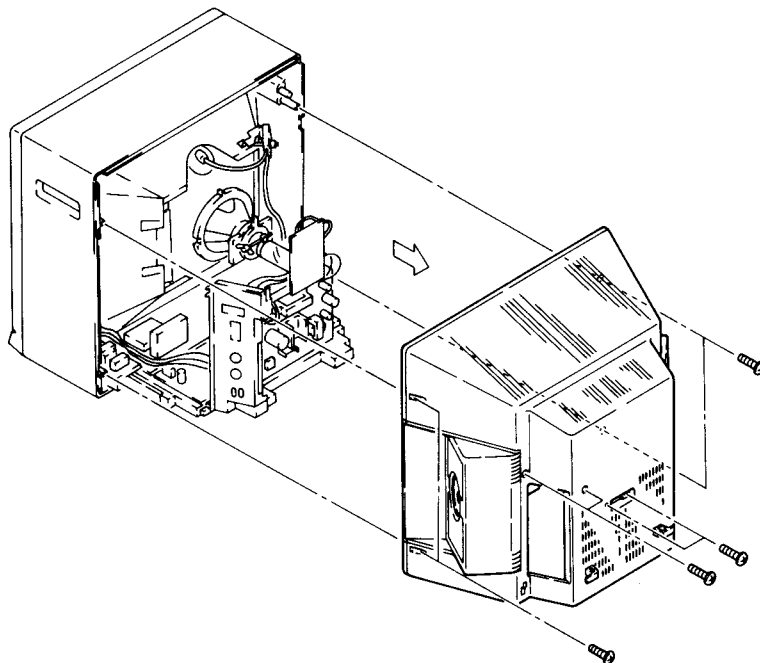
2-5. PICTURE TUBE REMOVAL



2-6. OPK-102 BOARD ATTACHING

Before installing OPK-102 unplug the set from the wall outlet.
After the installation is completes, check that the TV operates properly.

1. Remove the back cover.

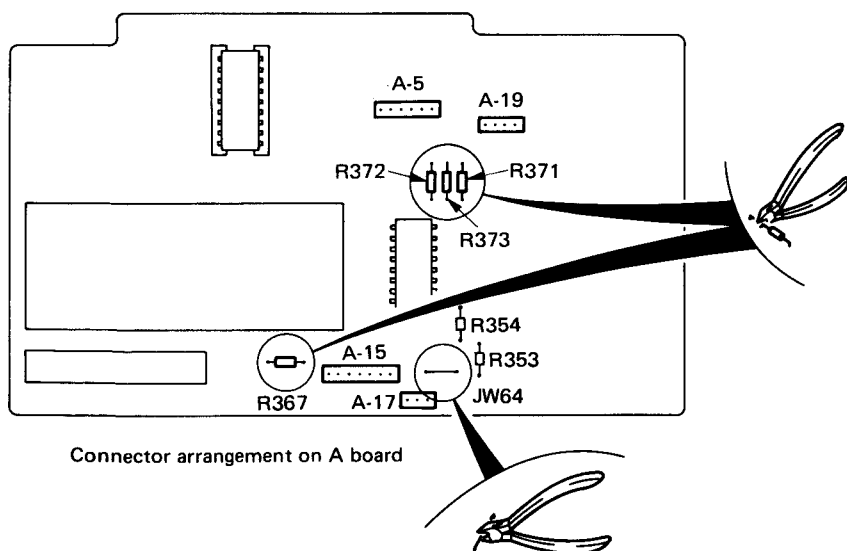


2. A BOARD REMODELING

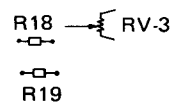
- Cut off R371, R372, R373 and R367 using a nipper as shown in the figure.
- Cut off the jumper (JW64) using a nipper as shown in the figure.
- Change the resistance value of R353 and R354 (R353 3.9K, R354 8.2K).
- Cut off D409 (H board) using a nipper as shown in the figure.

3. OPK-102 change the resistance

- Change the resistance value of RV-3, R18 and R19.
(RV-3 470K-B, R18 470K, R19 15K)

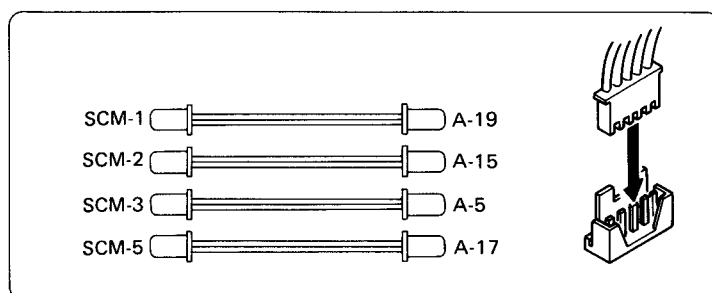


OPK-102 conductor side



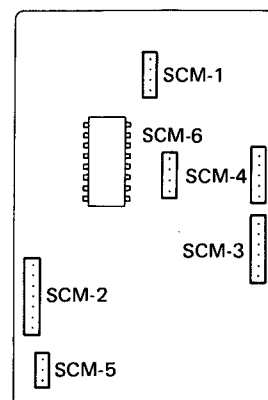
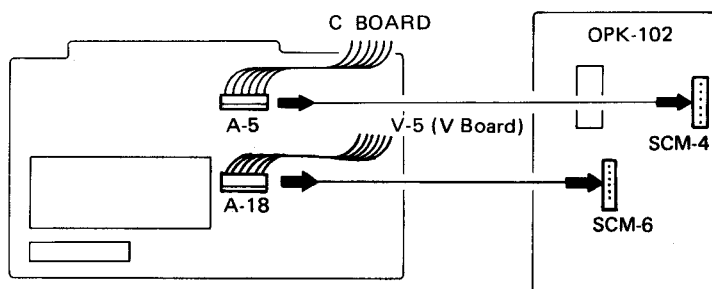
4. CONNECTOR CONNECTING

- Connect the other end of the harness connected to the OPK-102 board to each connector on the A and C boards, respectively, as shown in the figure below.
(Refer to the connector arrangement on the A, C and OPK-102 boards.)



- Connect the other end of the harness connected to the OPK-102 board to each connector on the A and V boards, as shown in the figure below.

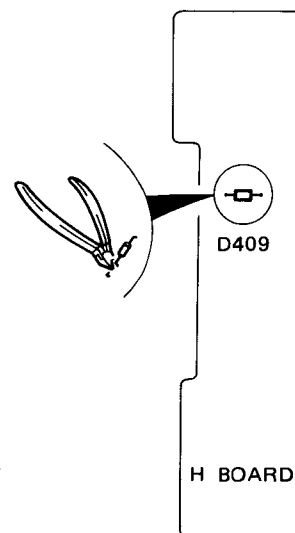
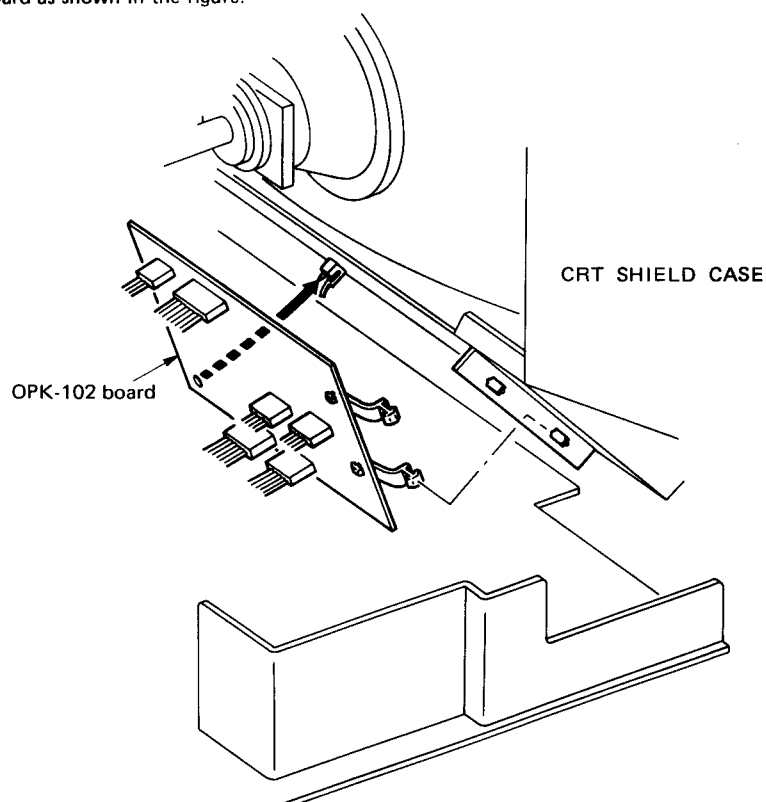
Disconnect and connect to SCM-4 and SCM-6.



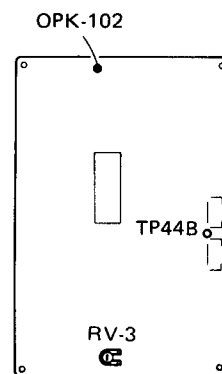
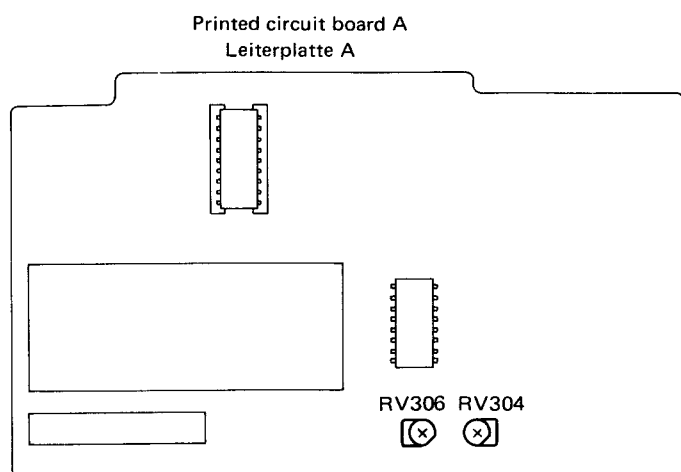
Connector arrangement on OPK-102 board.

5. OPK-102 BOARD MOUNTING.

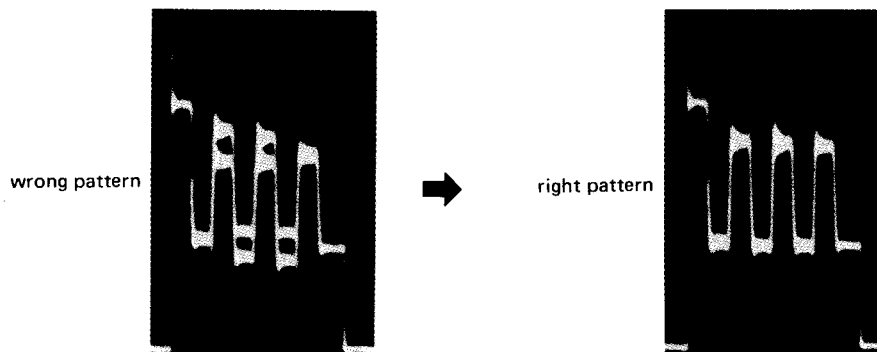
- Fix the OPK-102 board as shown in the figure.



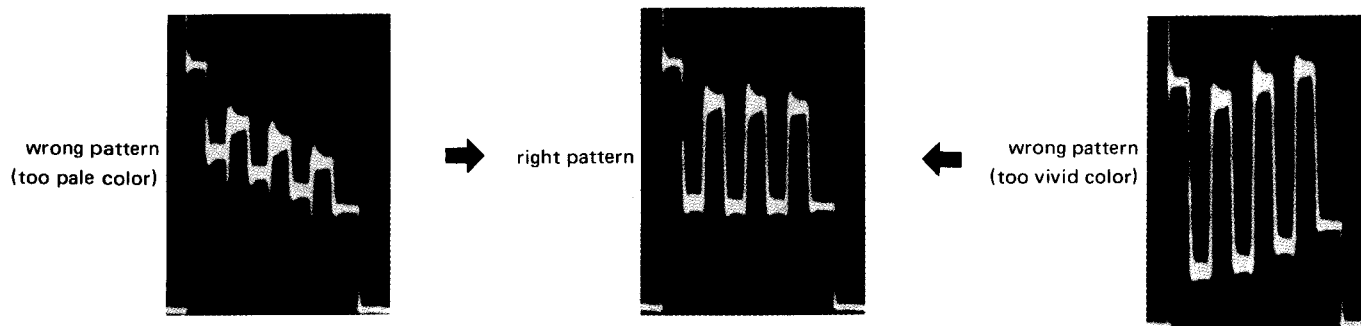
2-7. ADJUSTMENT





1. Plug the set to a wall outlet and turn on the power.
2. Connect the oscilloscope to the TP44B oscilloscope test pin on the OPK-102.
3. Select the SECAM color channel and adjust the color bar pattern (RV-3).

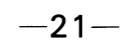


4. Select the PAL color channel and adjust the color bar pattern (RV-306).




5. Attach the panels, etc. and adjust the  control and  control.

3-1. CIRCUIT BOARDS LOCATION









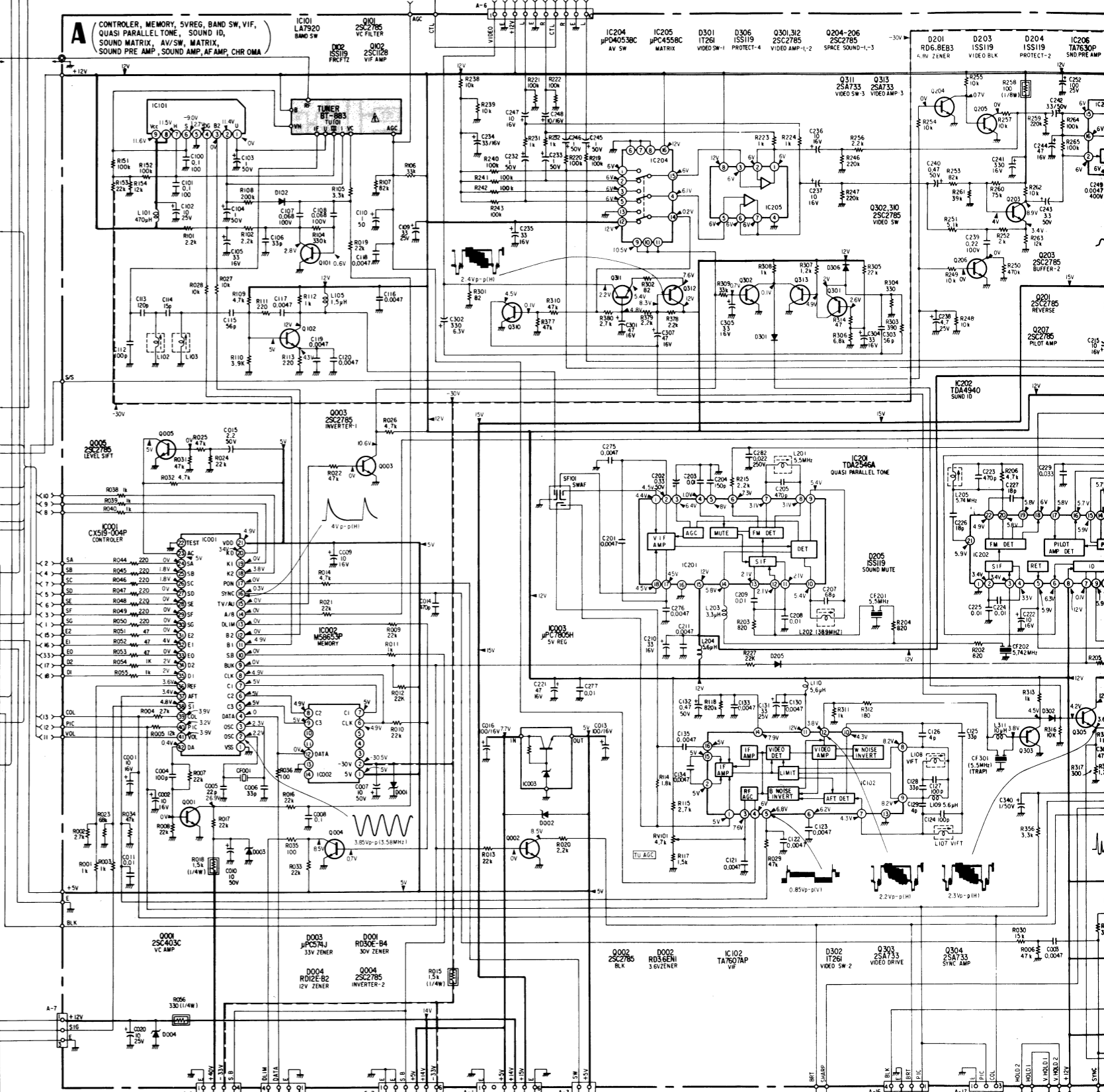
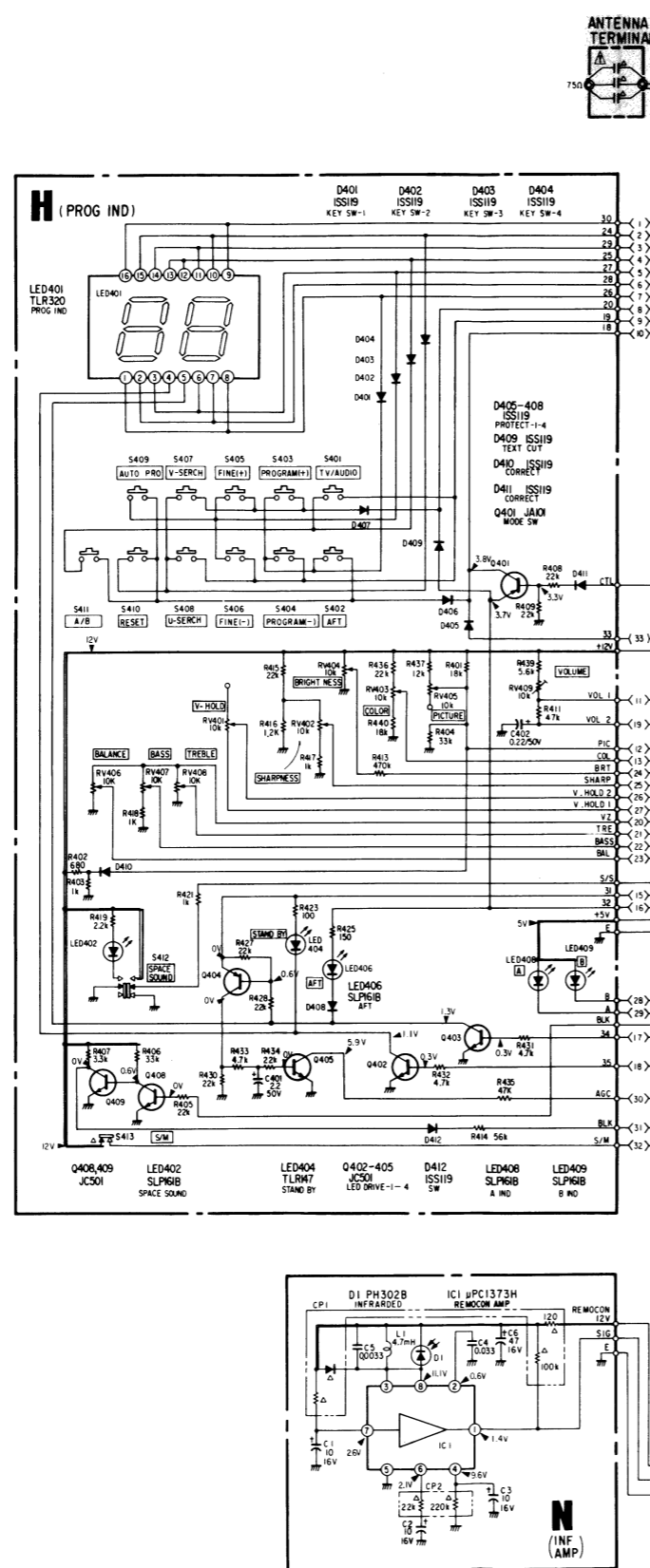


3-3. SCHEMATIC DIAGRAM

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note:

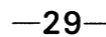
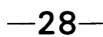
- All capacitors are in μF unless otherwise noted. p : μF 50WV or less are not indicated except for electrolytics.
- Resistors on the C, D, G boards are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted.
- Resistors on the A, H, J1 boards are in ohms, $\frac{1}{6}\text{W}$ unless otherwise noted.
 $k\Omega$: 1000Ω , $M\Omega$: $1000k\Omega$
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
-  : nonflammable resistor.
-  : fusible resistor.
- Δ : internal component.
-  : panel designation.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- Readings are taken with a 10M-ohms-par-volt digital multimeter.
- Readings are taken with a PAL colour-bar signal input.
-  : adjustment for repair.
-  : B+ bus.
-  : B- bus.

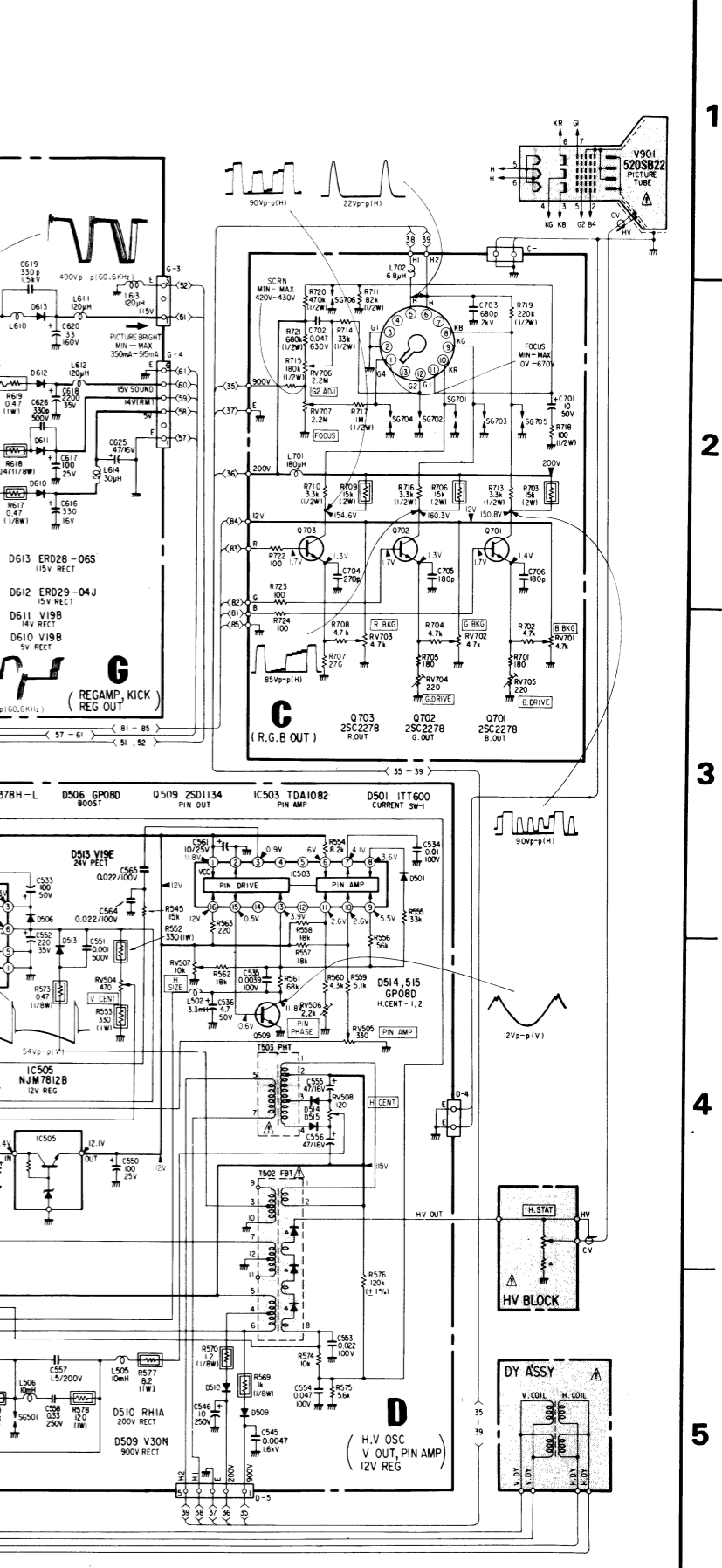
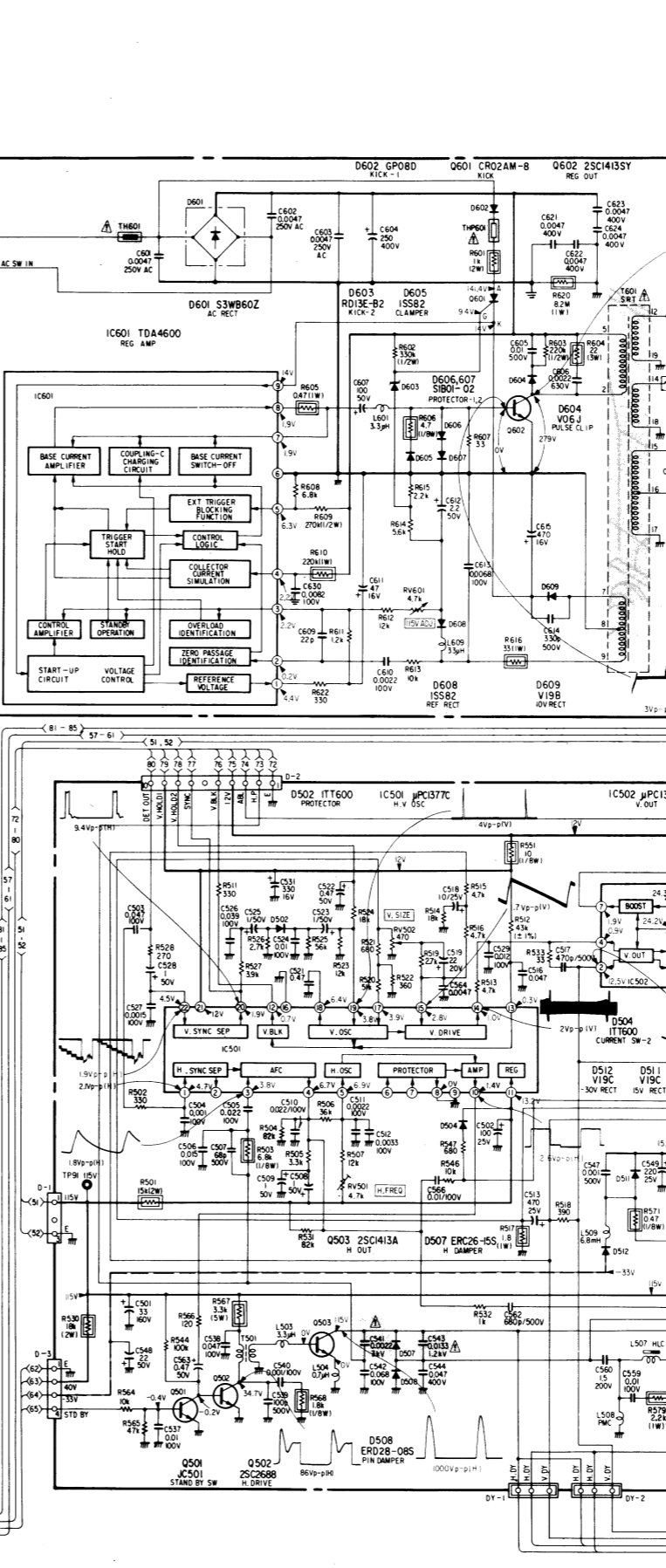
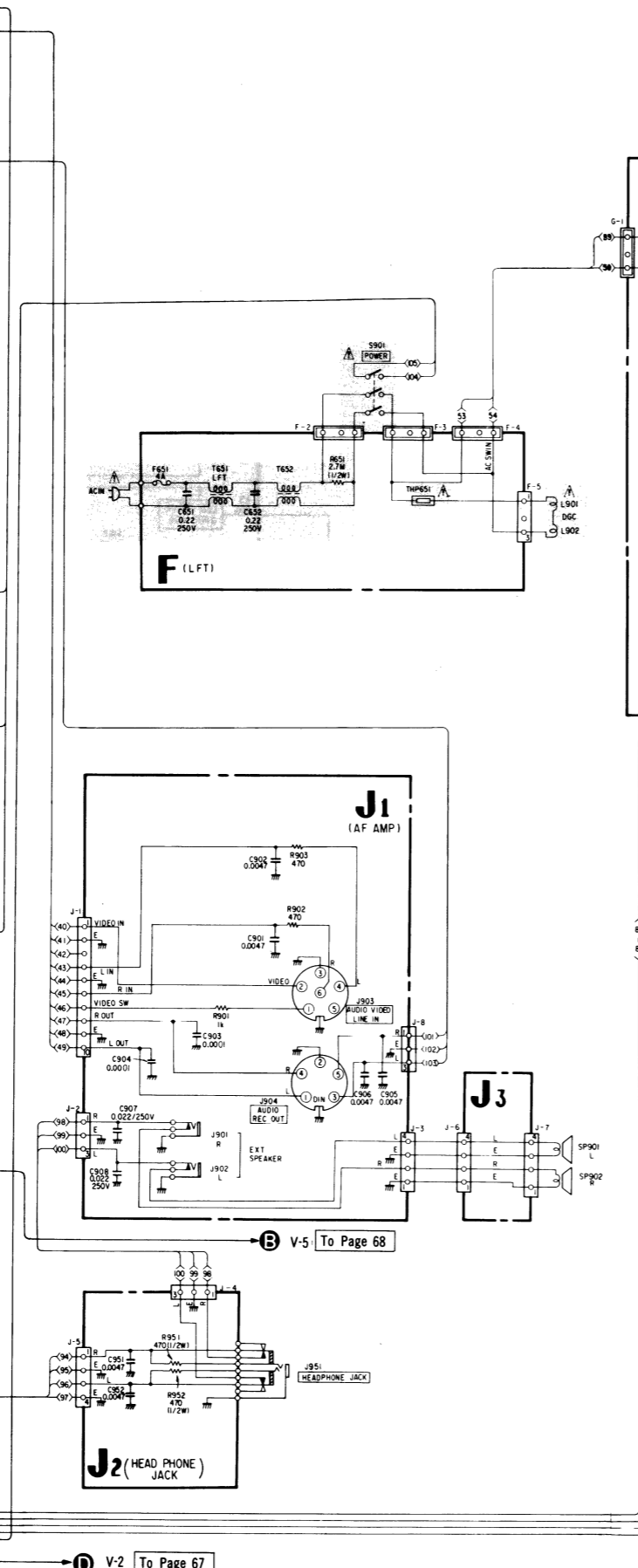
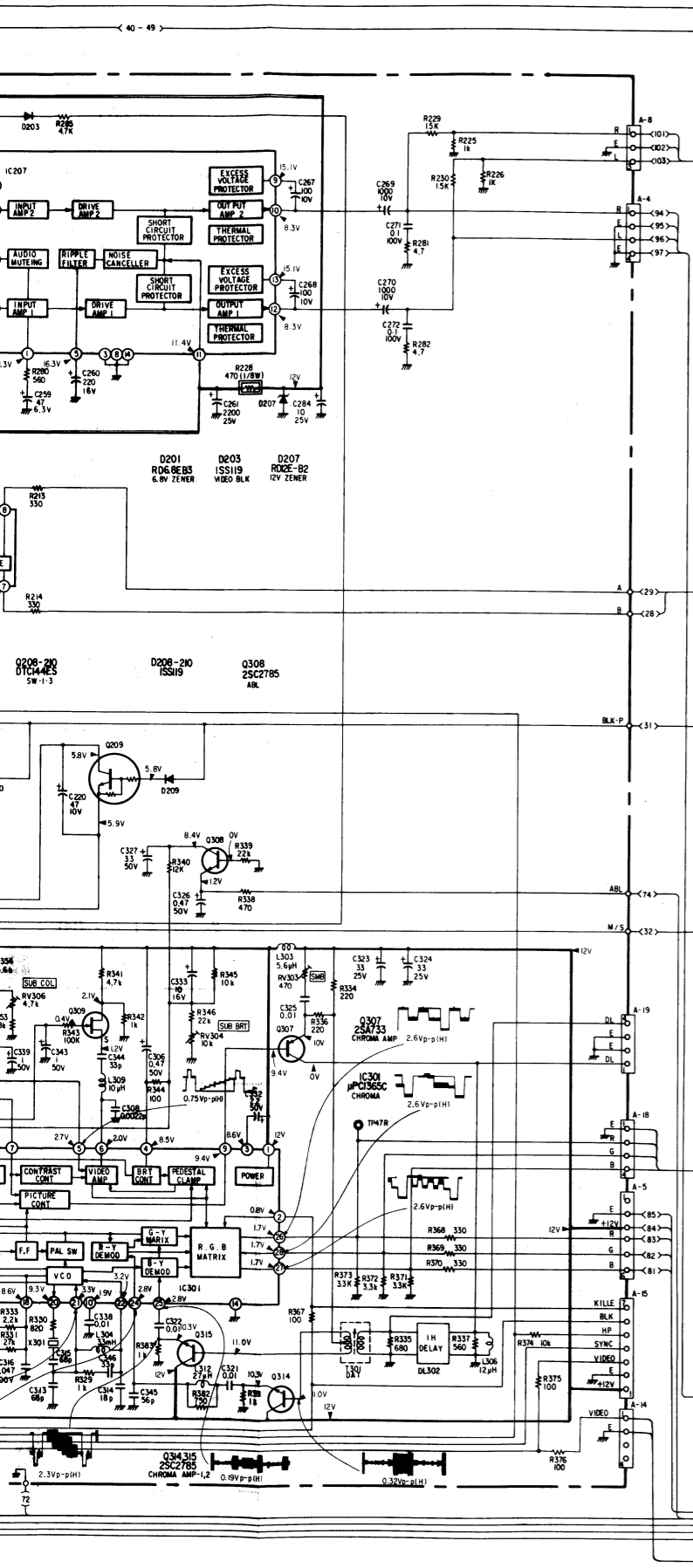


To Page 67 V-1 **E**

To Page 67 V-9 ©

→ **A** V-4 To Page 68





3-4. PRINTED WIRING BOARDS
— Conductor Side —

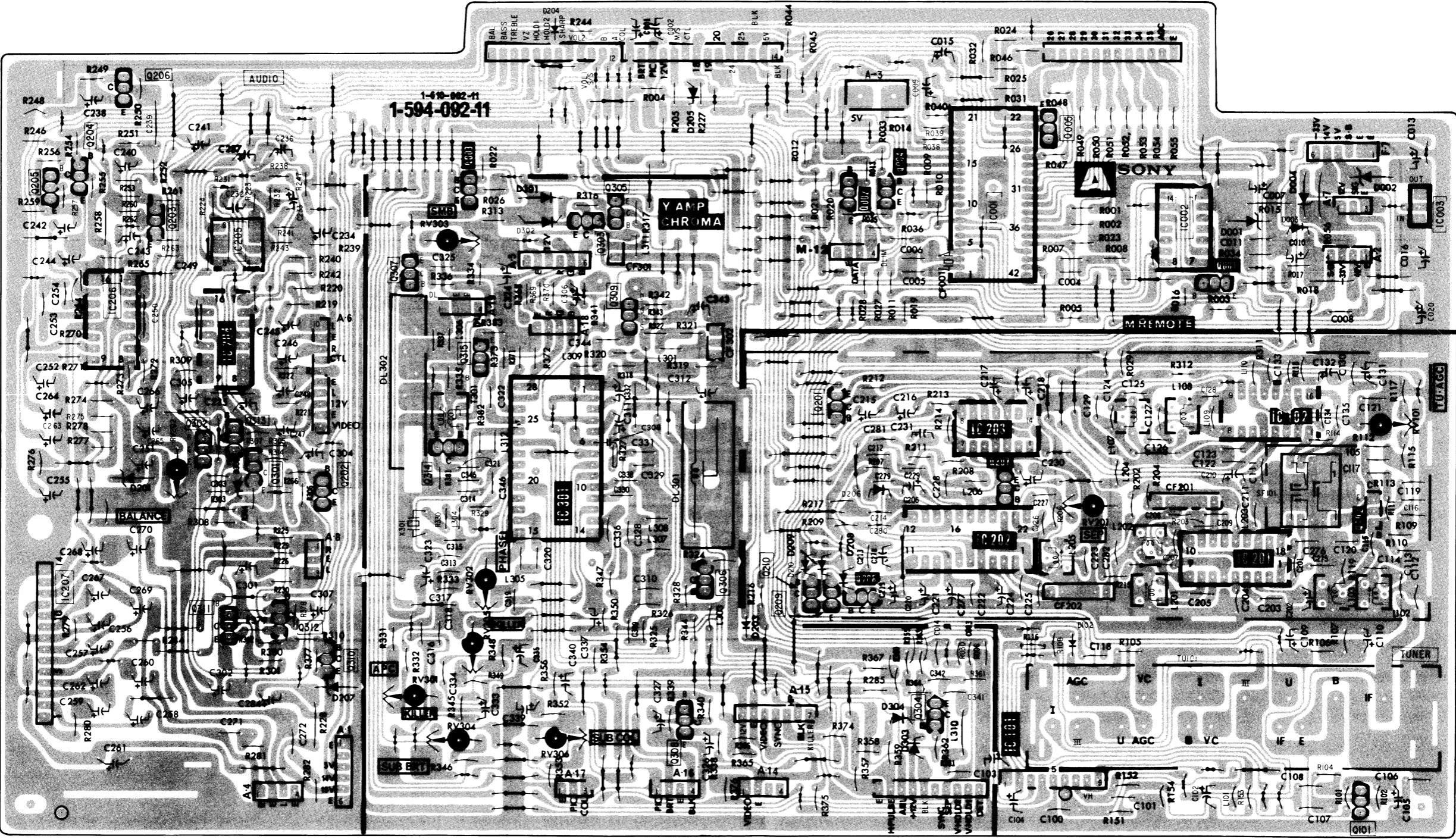
CONTROLLER, MEMORY, 5V REG,
BAND SW, VIF, QUASI CHROMA PARALLEL TONE
SOUND ID, MATRIX, SOUND PRE AMP,
SOUND AMP, AF AMP

A

A

— A Board —

Q IC	205	204	206	203	IC205	IC204	302, 313, 301	202	307	314	315	303	305	309	306	201	002	004	IC001	IC203	207	IC202	304	005	IC002	001	IC102	IC201	102	IC003	Q IC
D							311	312																							D
ADJ					RV202					RV303	RV301	RV302	RV305	RV306											RV201				RV101		ADJ



A

B

C

D

E

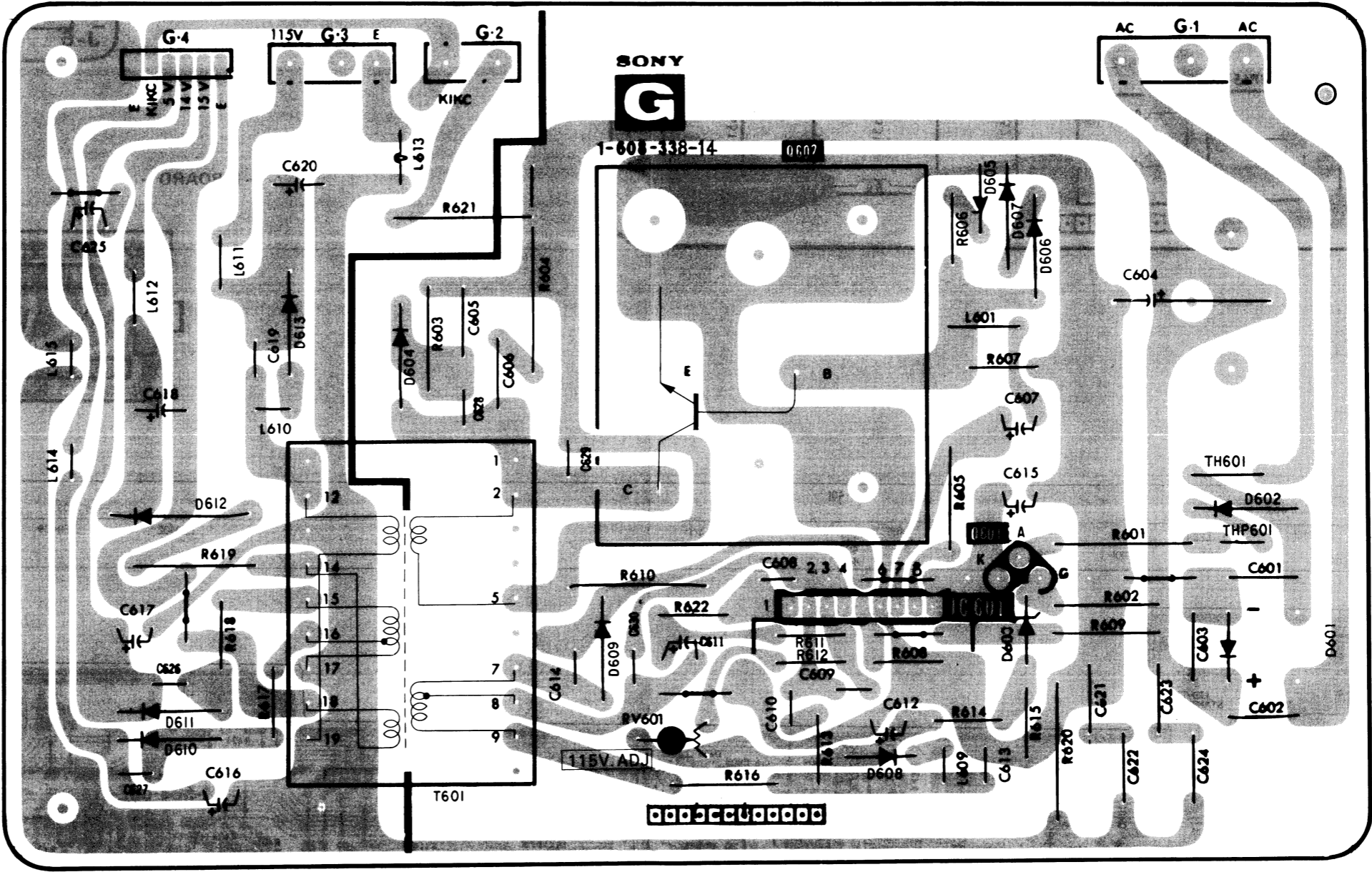
F

G

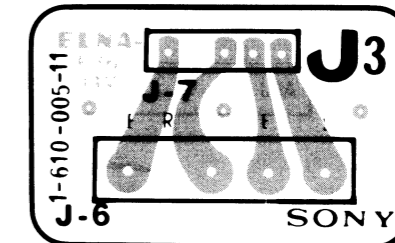
H

— G BOARD —

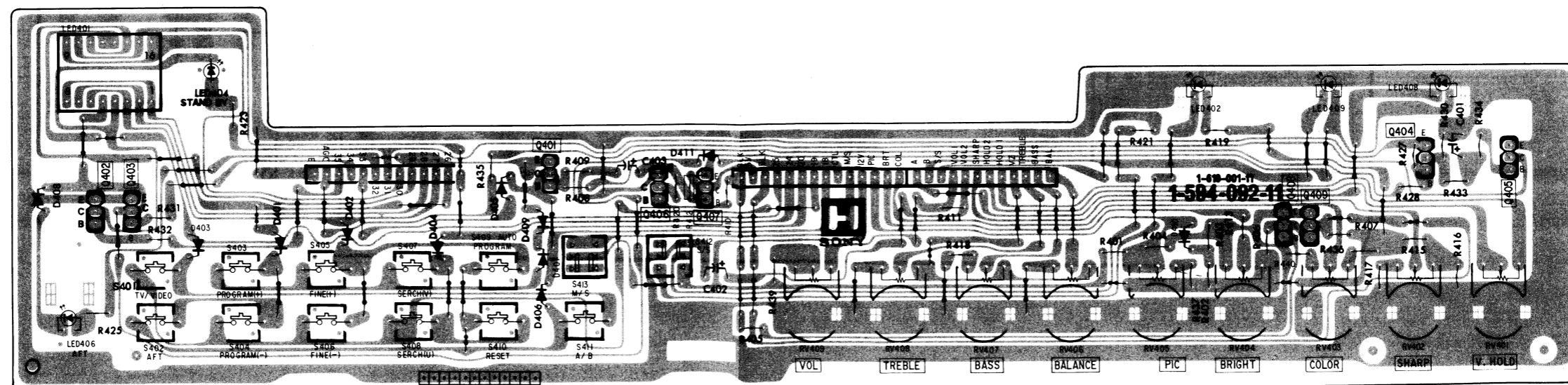
IC, Q	602 IC601 601										IC, Q
D	6I2 6I1 6I0	6I3	604	609	608	605,607,606	602	601	603		D
ADJ	RV601										ADJ



— J3 BOARD —

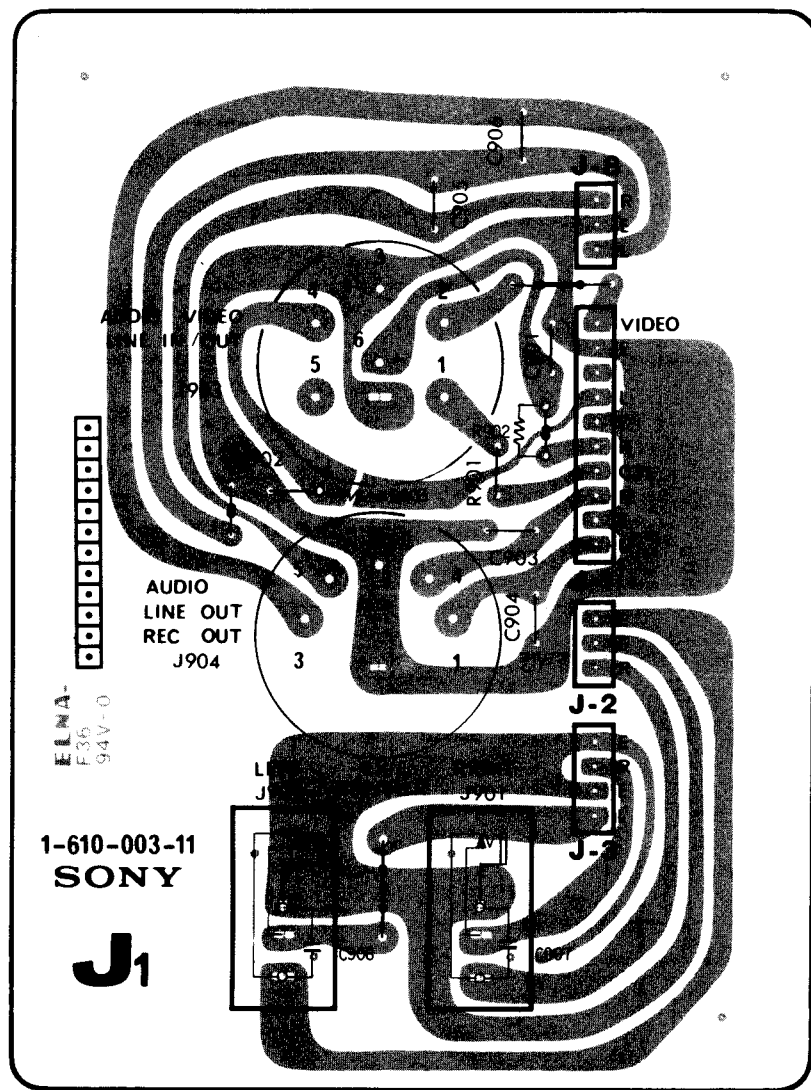


Q, IC	401										408, 409		404	405	Q, IC
	402, 403														
D	LED401	LED404	405			409	411	LED402			LED409	LED408	D		
	408	LED406	403	401	402	404	407			410					
							406								

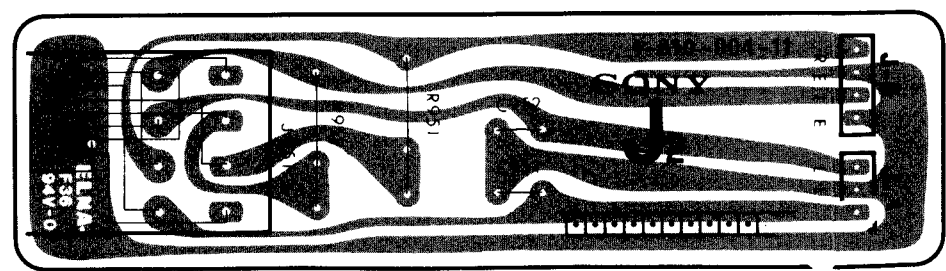


A
B
C
D

— J1 BOARD —



— J2 BOARD —



[R·G·B OUT]

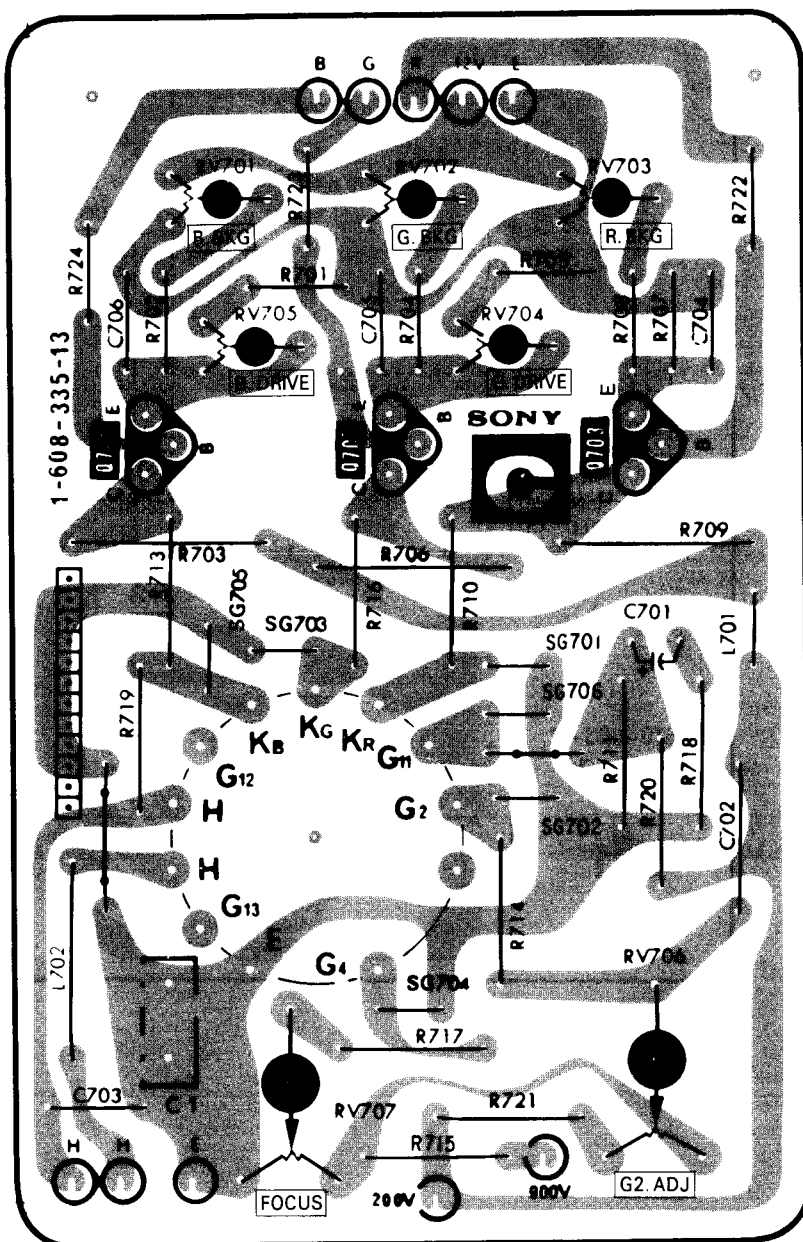
A

B

C

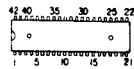
D

- C BOARD -



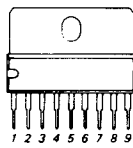
3-5. SEMICONDUCTORS

CX519-004P

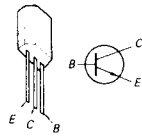


(Top view)

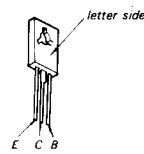
TDA4600-2



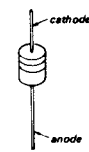
2SC634
2SC403C



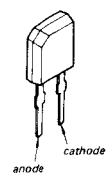
2SC2688



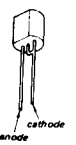
1SS119
1SS120
1SS148



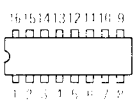
PH302B



μPC574J

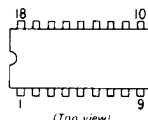


HD14053BP
TA7607AP
TA7630P
TDA1082
μPD4053BC



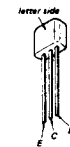
(Top view)

TDA2546A

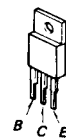


(Top view)

TDC144ES
2SA1175
2SC2785
2SC2785F



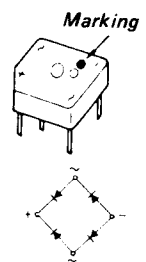
2SD1134



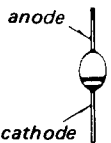
1T22
1T22A
1T261



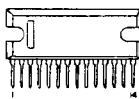
S3WB60S
S3WB60ZS



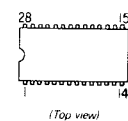
V06C
V06J
V19B
V19C
V19E
V30N



LA4440R



μPC1365C



(Top view)

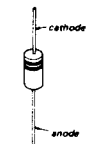
2SC403SP
2SC2458
2SC2458YLB
2SC2603



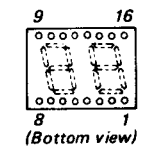
2SK107
2SK107-2
2SK107-3
2SK107-4



RH1A
SIB01-02
SIB01-02B



TLR320
SL-1222



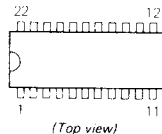
LA7920



μPC1373H



μPC1377C
TDA4940

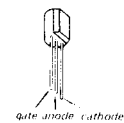


(Top view)

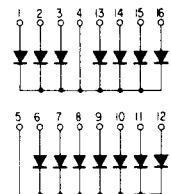
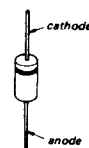
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2SC2009



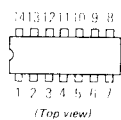
CR02AM-8



ERB12-02RK
GP08D



TDA4944
M58653P



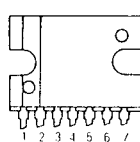
(Top view)

μPC4558C
NJM4558D

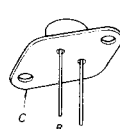


(Top view)

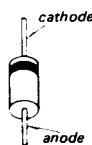
μPC1378H-L



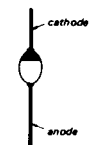
2SC1413SY
2SC1413A



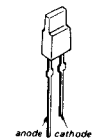
1N4148H
1S1555
1S2076
1S2473
1SS82
1SS133
1TT600
EM1Z
ERD28-06S
ERD28-08S
RD13EB2
US1035



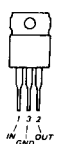
ERC26-15S



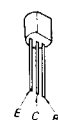
SLP161B



NJM7812B
μPC7805H



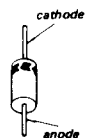
2SA733
2SA1015
2SA1026
2SC945
2SC1815
JA101
JC501



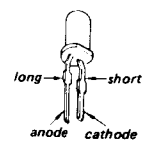
2SC2278



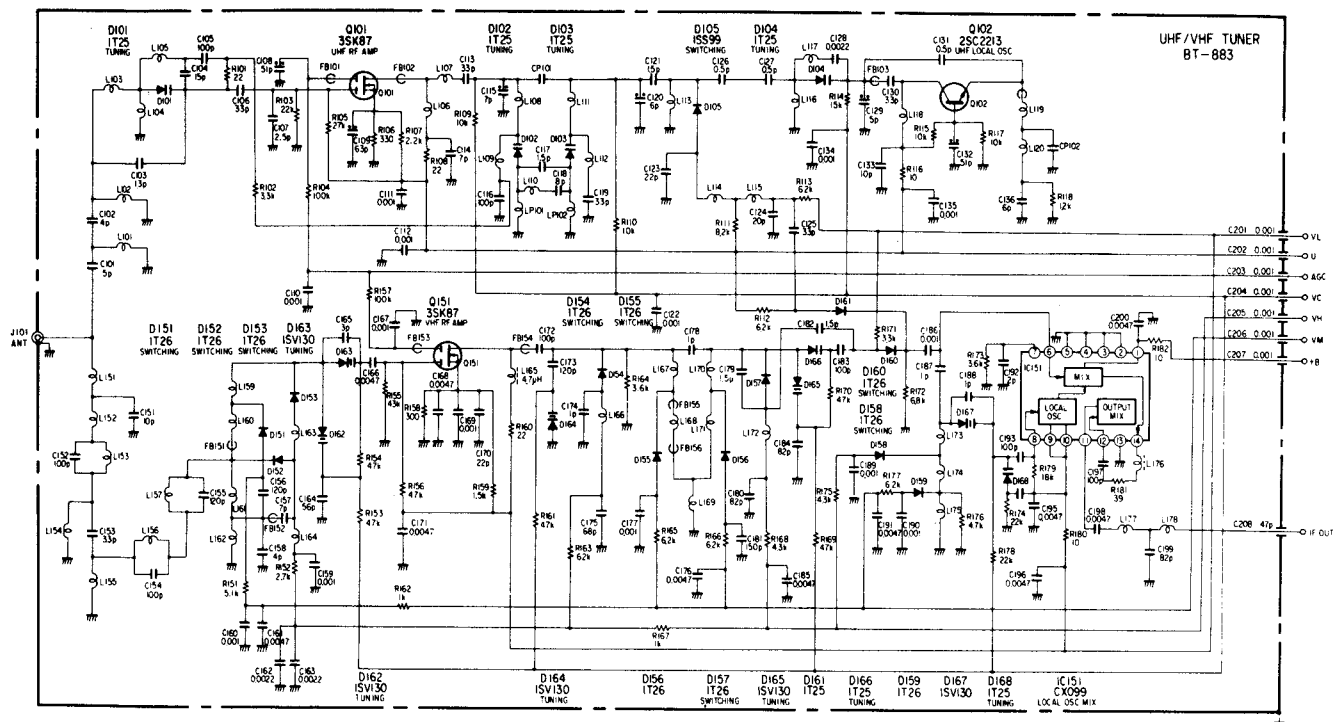
ERD29-04J



TLR147



3-6. TUNER SCHEMATIC DIAGRAM - UHF/VHF TUNER BT-883 -



SECTION 4 EXPLODED VIEWS

NOTE:

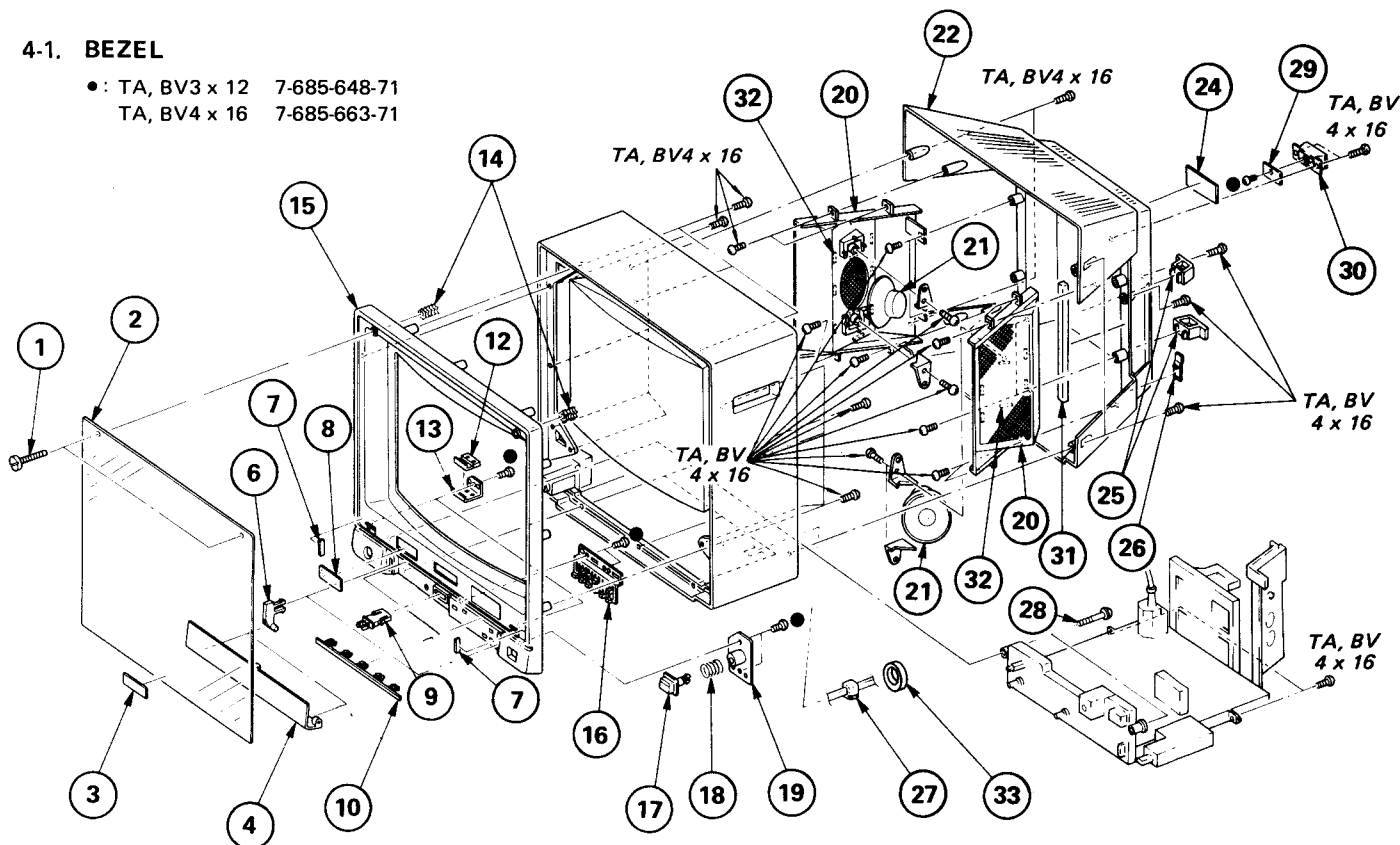
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

4-1. BEZEL

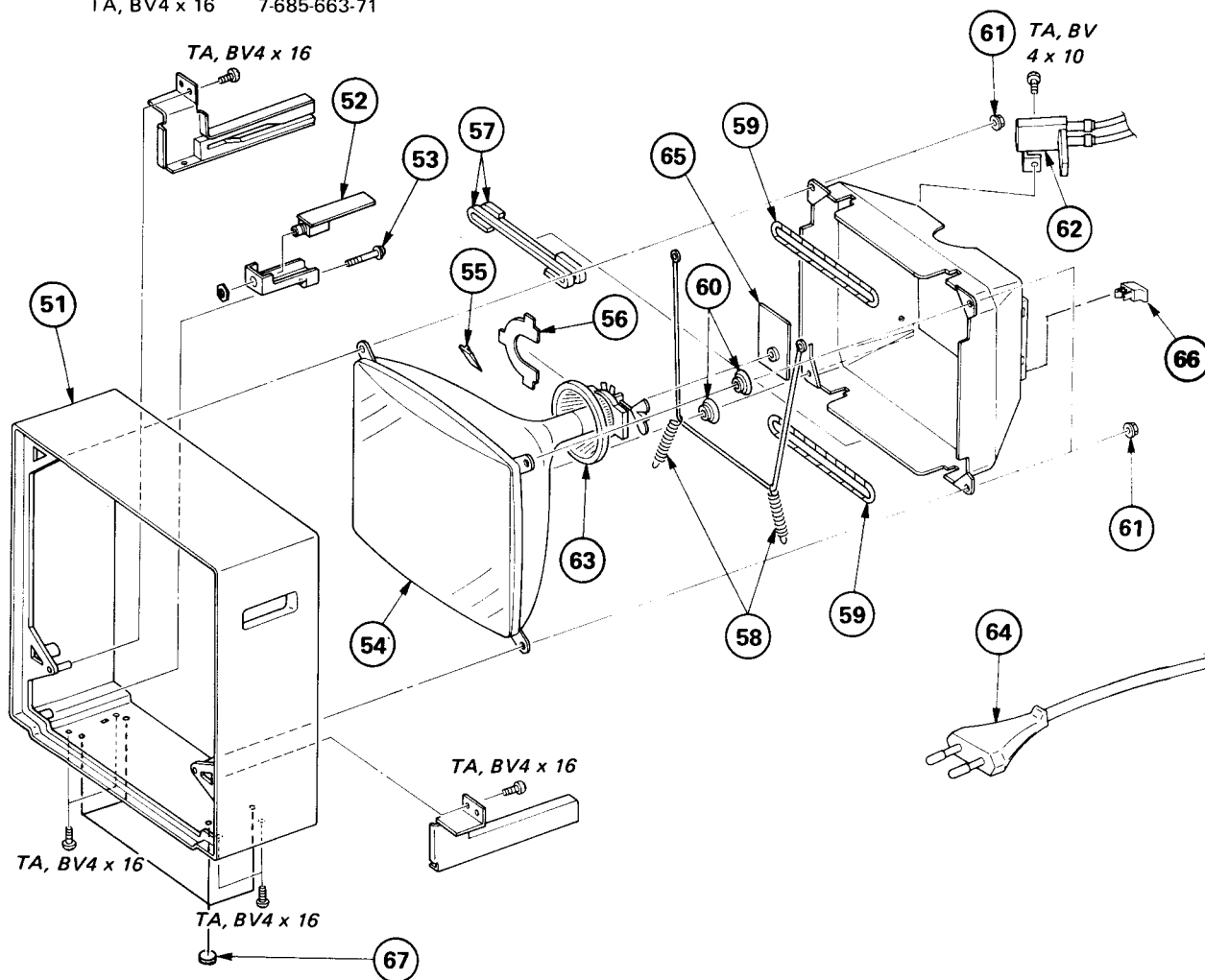
- TA, BV3 x 12 7-685-648-71
- TA, BV4 x 16 7-685-663-71



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	4-336-851-11	SCREW, ORNAMENTAL		18	4-362-278-00	SPRING, COMPRESSION	
2	4-366-806-00	FILTER, GLASS		19	▲4-362-206-00	HOLDER, POWER BUTTON	
3	X-3701-084-0	EMBLEM (LARGE) ASSY, SONY		20	X-4362-203-2	PLATE ASSY, BAFFLE, SPEAKER	
4	4-362-225-11	DOOR, CONTROL		21	1-503-194-00	SPEAKER	
6	4-362-203-00	SHAFT, DOOR		22	4-362-238-11	COVER, BACK	
7	4-341-961-00	SHEET (S)		24	▲4-364-503-00	LABEL, MODEL NUMBER	
8	▲4-362-289-00	PLATE, ORNAMENTAL, INDICATOR		25	4-316-003-00	HOLDER, CORD	
9	4-352-034-00	CATCHER, PUSH		26	4-329-127-00	CLAMP, CORD	
10	▲4-362-218-00	STRIP, ORNAMENTAL		27	▲4-022-115-01	HOLDER, AC CORD	
12	4-336-808-00	PROTECTOR, FILTER		28	4-319-520-00	SCREW, SPECIAL (+PW4X30)	
13	▲4-362-201-00	HOLDER, FILTER		29	▲1-610-005-00	J3 BOARD	
14	4-357-414-00	NUT (M4X20)		30	4-357-437-00	COVER, TERMINAL, SPEAKER	
15	X-4362-210-2	BEZEL ASSY	4 - 14	31	4-362-283-00	CUSHION	
16	4-362-221-11	BUTTON, MULTI		32	4-858-753-00	SHEET, DAMPER	
17	X-4362-201-0	BUTTON ASSY, POWER		33	1-543-179-00	RING, CORE	

4-2. CABINET

- : TA, BV3 x 8 7-685-646-71
- TA, BV4 x 10 7-685-660-71
- TA, BV4 x 16 7-685-663-71

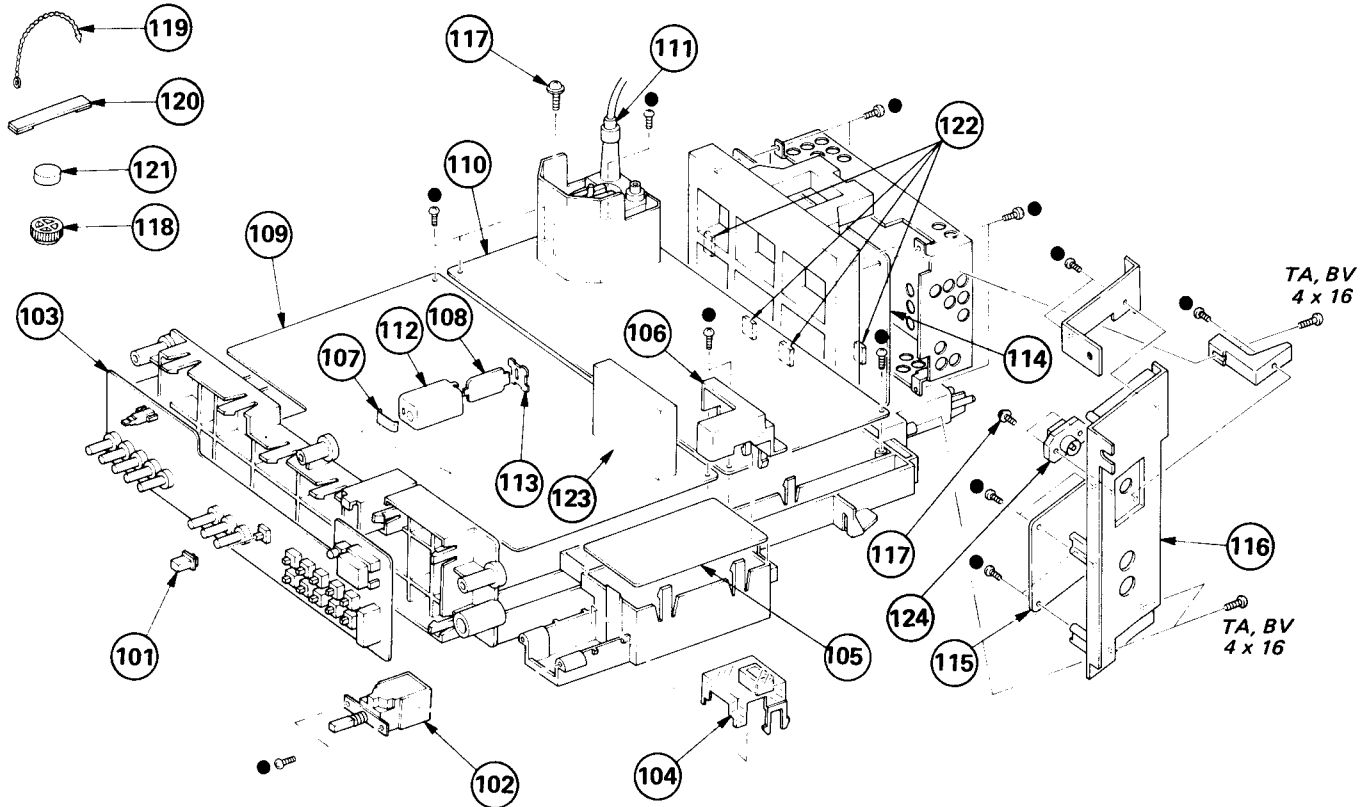


No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	X-4362-202-3	CABINET ASSY	66	60	4-348-567-00	WASHER, CRT POSITION	
52	▲:1-610-004-00	J2 BOARD		61	4-306-034-00	FLANGE NUT, (B) 5MM	
53	4-319-520-00	SCREW, SPECIAL (+PW4X30)		62	▲:1-228-714-21	RESISTOR ASSY, HIGH-VOLTAGE	
54	▲:8-738-704-05	CRT 520SB22		63	▲:1-451-204-31	DEFLECTION YOKE	
55	3-703-003-00	SPACER, DY		64	▲:1-551-270-31	CORD, POWER	
56	1-452-146-00	MAGNET, BMC		65	▲:A-1330-451-A	C BOARD, COMPLETE	
57	4-312-539-00	CUSHION (A), BEZEL		66	▲:3-659-681-00	HOLDER, PC BOARD	
58	4-303-774-XX	SPRING		67	4-809-913-XX	FOOT, F	
59	▲:1-426-087-61	COIL, DEGAUSSING					

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

4.3. CHASSIS

- : TA, BV3 x 12 7-685-648-71
- TA, BV4 x 16 7-685-663-71



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
101	4-362-211-00	PUSH BUTTON		112	▲:4-342-117-00	CASE, SHIELD (MAIN), R	
102	▲:1-553-225-12	SWITCH, PUSH		113	▲:4-342-118-00	LID, SHIELD CASE, R	
103	▲:1-610-001-00	H BOARD		114	▲:A-1245-189-A	G BOARD, COMPLETE	
104	▲:4-362-248-00	COVER, POWER SWITCH		115	▲:1-610-003-00	J1 BOARD	
105	▲:1-608-337-00	F BOARD		116	4-362-242-01	PANEL, CONNECTOR	
106	▲:4-362-247-00	COVER, AC TERMINAL		117	4-304-496-00	HEAD, WASHER, TAPPING SCREW	
107	▲:4-333-624-00	FILM (N), SPECIAL		118	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ	
108	▲:1-606-794-00	N BOARD		119	4-308-870-00	CLIP, LEAD WIRE	
109	▲:A-1295-769-A	A BOARD, COMPLETE		120	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
110	▲:A-1345-385-A	D BOARD, COMPLETE		121	1-452-032-00	MAGNET, DISK; 10MM φ	
111	▲:1-439-303-00	TRANSFORMER ASSY, FLYBACK		122	4-858-753-00	SHEET, DAMPER	
				123	▲:1-463-421-21	TUNER, ET (BT-883)	
				124	▲:1-536-797-11	TERMINAL BOARD ASSY, ANTENNA	

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked "●" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μF , PF : $\mu\mu\text{F}$

RESISTORS

- All resistors are in ohms
- F : nonflammable

COILS
• MMH : mH, UH : μ H

Ref.No	Part No.	Description	Remark
<p>▲:1-608-337-00 F BOARD *****</p>			
CAPACITOR			
C651	1-117-121-11	PAPER 0.22MF 20% 250V	
C652	1-117-121-11	PAPER 0.22MF 20% 250V	
CONNECTOR			
F2	▲:1-506-348-XX	3P PLUG (L)	
F3	▲:1-506-348-XX	3P PLUG (L)	
F4	▲:1-506-348-XX	3P PLUG (L)	
F5	▲:1-508-765-00	3P PLUG (M)	
FUSE			
F651	1-532-350-11	FUSE, TIME-LAG 4A	
	1-533-149-00	HOLDER, FUSE, F651	
RESISTOR			
R651	1-202-724-51	SOLID 2.7M 10% 1/2W	
TRANSFORMER			
T651	1-421-352-11	TRANSFORMER, FERRITE	
T652	1-421-592-00	TRANSFORMER, FERRITE	
THERMISTOR			
THP651	1-806-165-11	THERMISTOR (POSITIVE)	

<p>▲:A-1245-189-A G BOARD, COMPLETE *****</p>			
CAPACITOR			
C601	1-161-964-00	CERAMIC 0.0047MF 250V	
C602	1-161-964-00	CERAMIC 0.0047MF 250V	
C603	1-161-964-00	CERAMIC 0.0047MF 250V	
C604	1-125-167-00	ELECT (BLOCK) 250MF 400V	
C605	1-102-050-00	CERAMIC 0.01MF 500V	
C606	1-129-706-00	FILM 0.0022MF 10% 630V	
C607	1-124-025-00	ELECT 100MF 20% 16V	
C609	1-102-959-00	CERAMIC 22PF 5% 50V	
C611	1-124-025-00	ELECT 100uF 20% 16V	
C612	1-123-353-00	ELECT 2.2MF 20% 50V	
C613	1-108-375-00	MYLAR 0.0068MF 10% 100V	
C614	1-102-030-00	CERAMIC 330PF 10% 500V	
C615	1-123-323-00	ELECT 470MF 20% 16V	
C616	1-123-322-00	ELECT 330MF 20% 16V	
C617	1-123-333-00	ELECT 100MF 20% 25V	
C618	1-123-350-00	ELECT 2200MF 20% 35V	
C619	1-102-327-00	CERAMIC 330PF 15% 1.5KV	
C620	1-123-024-00	ELECT 33MF 160V	
C621	1-161-738-00	CERAMIC 0.0047MF 20% 400V	
C622	1-161-738-00	CERAMIC 0.0047MF 20% 400V	
C623	1-161-738-00	CERAMIC 0.0047MF 20% 400V	
C624	1-161-738-00	CERAMIC 0.0047MF 20% 400V	
C625	1-123-332-00	ELECT 47MF 20% 16V	
C626	1-102-030-00	CERAMIC 330PF 10% 500V	
C630	1-108-376-00	MYLAR 0.0082MF 10% 100V	
DIODE			
D601	8-719-503-06	DIODE S3WB60Z	
D602	8-719-300-45	DIODE EM1Z	
D603	8-719-100-68	DIODE RD13E-B2	
D604	8-719-901-39	DIODE V06J	
D605	8-719-901-83	DIODE 1SS83	
D606	8-719-200-02	DIODE 10E2	
D607	8-719-200-02	DIODE 10E2	
D608	8-719-901-83	DIODE 1SS83	
D609	8-719-901-93	DIODE V19E	
D610	8-719-901-93	DIODE V19E	
D611	8-719-901-93	DIODE V19E	
D612	8-719-900-26	DIODE ERD29-08J	
D613	8-719-928-08	DIODE ERD28-08	
CONNECTOR			
G1	▲:1-506-348-XX	3P PLUG (L)	
G3	▲:1-508-765-00	3P PLUG (M)	
G4	▲:1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P	
IC			
IC601	8-759-046-00	IC TDA4600	
	▲:4-356-301-00	HEAT SINK (D), IC601	
COIL			
L601	1-408-225-00	MICRO INDUCTOR 3.3uH	
L609	1-408-415-00	MICRO INDUCTOR 33uH	
L610	1-425-613-00	COIL, AIR-CORE, QF TYPE	
L611	1-459-215-00	CORE COIL 120uH	
L612	1-459-215-00	CORE COIL 120uH	
L613	1-459-215-00	CORE COIL 120uH	
L614	1-459-407-00	COIL, FERRITE CHOKE 30uH	
TRANSISTOR			
Q601	8-719-000-28	THYRISTOR CRO2AM-8	
Q602	8-729-300-60	TRANSISTOR 2SC1413-SY	
	3-701-609-00	BUSHING (B), TR, Q602	
	▲:4-314-938-01	RETAINER (TO-3), TRANSISTOR, Q602	

Ref.No	Part No.	Description			Remark	Ref.No	Part No.	Description			Remark
C134	1-102-125-00	CERAMIC	0.0047MF	10%	50V	C252	1-123-333-00	ELECT	100MF	20%	25V
C135	1-102-125-00	CERAMIC	0.0047MF	10%	50V	C253	1-110-176-81	MYLAR	0.12MF	10%	100V
C201	1-102-125-00	CERAMIC	0.0047MF	10%	50V	C254	1-110-186-00	MYLAR	0.0047MF	10%	400V
C202	1-123-286-00	ELECT	0.33MF	20%	50V	C255	1-123-332-00	ELECT	47MF	20%	16V
C203	1-101-004-00	CERAMIC	0.01MF		50V	C256	1-123-306-00	ELECT	47MF	20%	6.3V
C204	1-101-361-00	CERAMIC	150PF	5%	50V	C257	1-123-447-00	ELECT	0.22MF	20%	50V
C205	1-130-014-00	FILM	470PF	5%	50V	C258	1-123-447-00	ELECT	0.22MF	20%	50V
C206	1-123-356-00	ELECT	10MF	20%	16V	C259	1-123-306-00	ELECT	47MF	20%	6.3V
C207	1-102-525-00	CERAMIC	68PF	5%	50V	C260	1-123-321-00	ELECT	220MF	20%	16V
C208	1-101-004-00	CERAMIC	0.01MF		50V	C261	1-123-338-00	ELECT	2200MF	20%	25V
C209	1-101-004-00	CERAMIC	0.01MF		50V	C262	1-123-356-00	ELECT	10MF	20%	16V
C210	1-123-318-00	ELECT	33MF	20%	16V	C263	1-123-356-00	ELECT	10MF	20%	16V
C211	1-102-125-00	CERAMIC	0.0047MF	10%	50V	C264	1-123-356-00	ELECT	10MF	20%	16V
C212	1-108-371-00	MYLAR	0.0033MF	10%	100V	C265	1-123-356-00	ELECT	10MF	20%	16V
C213	1-108-371-00	MYLAR	0.0033MF	10%	100V	C266	1-123-586-00	ELECT	0.1MF	20%	50V
C214	1-102-125-00	CERAMIC	0.0047MF	10%	50V	C267	1-123-307-00	ELECT	100MF	20%	10V
C215	1-123-356-00	ELECT	10MF	20%	16V	C268	1-123-307-00	ELECT	100MF	20%	10V
C216	1-123-356-00	ELECT	10MF	20%	16V	C269	1-123-311-00	ELECT	1000MF	20%	10V
C217	1-123-318-00	ELECT	33MF	20%	16V	C270	1-123-311-00	ELECT	1000MF	20%	10V
C218	1-123-356-00	ELECT	10MF	20%	16V	C271	1-110-175-00	MYLAR	0.1MF	10%	100V
C219	1-123-306-00	ELECT	47MF	20%	10V	C272	1-110-175-00	MYLAR	0.1MF	10%	100V
C220	1-123-306-00	ELECT	47MF	20%	10V	C275	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C221	1-123-332-00	ELECT	47MF	20%	16V	C276	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C222	1-123-356-00	ELECT	10MF	20%	16V	C277	1-101-004-00	CERAMIC	0.01MF		50V
C223	1-130-014-00	FILM	470PF	5%	50V	C278	1-123-379-00	ELECT	0.47MF	20%	50V
C224	1-101-004-00	CERAMIC	0.01MF		50V	C279	1-108-371-00	MYLAR	0.0033MF	10%	100V
C225	1-101-004-00	CERAMIC	0.01MF		50V	C280	1-108-371-00	MYLAR	0.0033MF	10%	100V
C226	1-102-513-00	CERAMIC	18PF	5%	50V	C281	1-110-182-00	MYLAR	0.022MF	10%	250V
C227	1-102-513-00	CERAMIC	18PF	5%	50V	C282	1-110-182-00	MYLAR	0.022MF	10%	250V
C228	1-108-570-00	MYLAR	0.0043MF	5%	50V	C283	1-123-316-00	ELECT	10uF	20%	16V
C229	1-130-626-00	FILM	0.033MF	5%	50V	C284	1-123-356-00	ELECT	10MF	20%	25V
C230	1-123-379-00	ELECT	0.47MF	20%	50V	C301	1-123-332-00	ELECT	47MF	20%	16V
C231	1-123-379-00	ELECT	0.47MF	20%	50V	C302	1-123-297-00	ELECT	330MF	20%	6.3V
C232	1-123-380-00	ELECT	1MF	20%	50V	C303	1-101-884-00	CERAMIC	56PF	5%	50V
C233	1-123-380-00	ELECT	1MF	20%	50V	C304	1-123-318-00	ELECT	33MF	20%	16V
C234	1-123-318-00	ELECT	33MF	20%	16V	C305	1-123-318-00	ELECT	33MF	20%	16V
C235	1-123-318-00	ELECT	33MF	20%	16V	C306	1-123-379-00	ELECT	0.47MF	20%	50V
C236	1-123-356-00	ELECT	10MF	20%	16V	C307	1-123-332-00	ELECT	47MF	20%	16V
C237	1-123-356-00	ELECT	10MF	20%	16V	C308	1-102-959-00	CERAMIC	22PF	5%	50V
C238	1-123-328-00	ELECT	4.7MF	20%	25V	C309	1-101-880-00	CERAMIC	47PF	5%	50V
C239	1-108-393-00	MYLAR	0.22MF	10%	100V	C310	1-102-678-00	CERAMIC	100PF	5%	50V
C240	1-123-379-00	ELECT	0.47MF	20%	50V	C311	1-123-356-00	ELECT	10MF	20%	16V
C241	1-123-322-00	ELECT	330MF	20%	16V	C312	1-123-343-00	ELECT	33MF	20%	25V
C242	1-123-354-00	ELECT	3.3MF	20%	50V	C313	1-101-888-00	CERAMIC	68PF	5%	50V
C243	1-123-354-00	ELECT	3.3MF	20%	50V	C314	1-102-953-00	CERAMIC	18PF	5%	50V
C244	1-123-332-00	ELECT	47MF	20%	16V	C315	1-102-525-00	CERAMIC	68PF	5%	50V
C245	1-123-380-00	ELECT	1MF	20%	50V	C316	1-110-171-00	MYLAR	0.047MF	10%	100V
C246	1-123-380-00	ELECT	1MF	20%	50V	C317	1-123-379-00	ELECT	0.47MF	20%	50V
C247	1-123-356-00	ELECT	10MF	20%	16V	C318	1-110-171-00	MYLAR	0.047MF	10%	100V
C248	1-123-356-00	ELECT	10MF	20%	16V	C319	1-102-971-00	CERAMIC	82PF	5%	50V
C249	1-110-186-00	MYLAR	0.0047MF	10%	400V	C320	1-102-973-00	CERAMIC	100PF	5%	50V
C250	1-110-176-00	MYLAR	0.12MF	10%	100V	C321	1-101-004-00	CERAMIC	0.01MF		50V
C251	1-123-332-00	ELECT	47MF	20%	16V	C322	1-101-004-00	CERAMIC	0.01MF		50V
						C323	1-123-343-00	ELECT	33MF	20%	25V



Ref.No	Part No.	Description	Remark
C324	1-123-343-00	ELECT 33MF	20% 25V
C325	1-101-004-00	CERAMIC 0.01MF	50V
C326	1-123-379-00	ELECT 0.47MF	20% 50V
C327	1-123-354-00	ELECT 3.3MF	20% 50V
C328	1-102-887-00	CERAMIC 47PF	5% 50V
C329	1-102-889-00	CERAMIC 39PF	5% 50V
C330	1-102-678-00	CERAMIC 100PF	5% 50V
C331	1-102-850-00	CERAMIC 56PF	5% 50V
C332	1-123-353-00	ELECT 2.2MF	20% 50V
C333	1-131-371-00	TANTALUM 10MF	20% 16V
C334	1-101-004-00	CERAMIC 0.01MF	50V
C335	1-123-343-00	ELECT 33MF	20% 25V
C336	1-110-175-00	MYLAR 0.1MF	10% 100V
C337	1-123-380-00	ELECT 1MF	20% 50V
C338	1-101-004-00	CERAMIC 0.01MF	50V
C339	1-123-380-00	ELECT 1MF	20% 50V
C340	1-123-380-00	ELECT 1MF	20% 50V
C341	1-102-971-00	CERAMIC 82PF	5% 50V
C342	1-110-190-00	MYLAR 0.01MF	10% 400V
C343	1-123-380-00	ELECT 1MF	20% 50V
C344	1-102-963-00	CERAMIC 33PF	5% 50V
C345	1-101-884-00	CERAMIC 56PF	5% 50V
C346	1-102-963-00	CERAMIC 33PF	5% 50V

FILTER

CF001	1-527-790-00	OSCILLATOR, CERAMIC
CF201	1-527-840-00	FILTER, CERAMIC
CF202	1-527-839-00	FILTER, CERAMIC
CF301	1-404-134-00	TRAP, CERAMIC (5.5MHZ)
CF302	1-409-332-00	CERAMIC TRAP (4.5MHZ)

DIODE

D001	8-719-101-02	DIODE RD30E-B4
D002	8-719-102-58	DIODE RD3.6E-N2
D003	8-759-157-40	IC UPC574J
D004	8-719-100-65	DIODE RD12E-B2
D102	8-719-911-19	DIODE 1SS119
D201	8-719-100-42	DIODE RD6.8E-B3
D202	8-719-911-19	DIODE 1SS119
D203	8-719-911-19	DIODE 1SS119
D204	8-719-911-19	DIODE 1SS119
D205	8-719-911-19	DIODE 1SS119
D206	8-719-911-19	DIODE 1SS119
D207	8-719-100-65	DIODE RD12E-B2
D208	8-719-911-19	DIODE 1SS119
D209	8-719-911-19	DIODE 1SS119
D210	8-719-911-19	DIODE 1SS119
D301	8-719-026-11	DIODE 1T261
D302	8-719-026-11	DIODE 1T261
D303	8-719-911-19	DIODE 1SS119
D304	8-719-911-19	DIODE 1SS119
D306	8-719-911-19	DIODE 1SS119

Ref.No	Part No.	Description	Remark
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DELAY LINE

DL301	1-415-330-00	DELAY LINE, Y
DL302	1-415-185-12	DELAY LINE (1H)

CONNECTOR

F7	1-560-126-00	PLUG, CONNECTOR (2.5MM PITCH)
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IC

IC001	8-759-600-63	IC CX519-004P
IC002	8-759-600-66	IC M58653P
IC003	8-759-171-05	IC UPC7805H
IC101	8-759-800-12	IC LA7920
IC102	8-759-276-07	IC TA7607AP
IC201	6-066-719-40	IC TDA2546
IC202	8-759-007-54	IC TDA4940
IC203	8-759-007-55	IC TDA4944
IC204	8-759-140-53	IC UPD4053BC
IC205	8-759-145-58	IC UPC4558C
IC206	8-759-276-30	IC TA7630P
IC207	8-759-800-15	IC LA4440R
IC301	8-759-113-65	IC UPC1365C

COIL

L101	1-408-623-00	MICRO INDUCTOR 470UH
L102	1-404-476-00	COIL, IF
L103	1-404-476-00	COIL, IF
L105	1-408-593-00	MICRO INDUCTOR 1.5UH
L107	1-404-427-00	VIFT
L108	1-404-427-00	VIFT
L109	1-408-600-00	MICRO INDUCTOR 5.6UH
L110	1-408-600-00	MICRO INDUCTOR 5.6UH
L201	1-404-477-00	COIL, IF
L202	1-404-476-00	COIL, IF
L203	1-408-597-00	MICRO INDUCTOR 3.3UH
L204	1-408-600-00	MICRO INDUCTOR 5.6UH
L205	1-404-477-00	COIL, IF
L206	1-408-947-00	MICRO INDUCTOR 2.2MMH
L301	1-408-605-00	MICRO INDUCTOR 15UH
L303	1-408-600-00	MICRO INDUCTOR 5.6UH
L304	1-408-942-00	MICRO INDUCTOR 3.3MMH
L305	1-408-607-00	MICRO INDUCTOR 22UH
L306	1-408-602-00	MICRO INDUCTOR 8.2UH
L307	1-408-607-00	MICRO INDUCTOR 22UH
L308	1-408-602-00	MICRO INDUCTOR 8.2UH
L309	1-408-603-00	MICRO INDUCTOR 10UH
L310	1-408-243-00	MICRO INDUCTOR 12MMH
L311	1-408-603-00	MICRO INDUCTOR 10UH
L312	1-408-608-00	MICRO INDUCTOR 27UH

CONNECTOR

M12	1-560-124-00	PLUG, CONNECTOR (2.5MM PITCH)
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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
<u>TRANSISTOR</u>							
Q001	8-729-603-50	TRANSISTOR 2SC403SP		R018	1-247-663-00	CARBON 1.5K 5%	1/4W F
Q002	8-729-245-83	TRANSISTOR 2SC2458		R019	1-247-863-00	CARBON 22K 5%	1/6W
Q003	8-729-245-83	TRANSISTOR 2SC2458		R020	1-247-839-00	CARBON 2.2K 5%	1/6W
Q004	8-729-245-83	TRANSISTOR 2SC2458		R021	1-247-863-00	CARBON 22K 5%	1/6W
Q005	8-729-245-83	TRANSISTOR 2SC2458		R022	1-247-871-00	CARBON 47K 5%	1/6W
Q101	8-729-245-83	TRANSISTOR 2SC2458		R023	1-247-875-00	CARBON 68K 5%	1/6W
Q102	8-765-300-00	TRANSISTOR 2SC2009		R024	1-247-863-00	CARBON 22K 5%	1/6W
Q201	8-729-245-83	TRANSISTOR 2SC2458		R025	1-247-871-00	CARBON 47K 5%	1/6W
Q202	8-729-117-54	TRANSISTOR 2SA1175		R026	1-247-847-00	CARBON 4.7K 5%	1/6W
Q203	8-729-245-83	TRANSISTOR 2SC2458		R027	1-247-855-00	CARBON 10K 5%	1/6W
Q204	8-729-245-83	TRANSISTOR 2SC2458		R028	1-247-855-00	CARBON 10K 5%	1/6W
Q205	8-729-245-83	TRANSISTOR 2SC2458		R029	1-247-871-00	CARBON 47K 5%	1/6W
Q206	8-729-245-83	TRANSISTOR 2SC2458		R030	1-247-859-00	CARBON 15K 5%	1/6W
Q207	8-729-245-83	TRANSISTOR 2SC2458		R031	1-247-871-00	CARBON 47K 5%	1/6W
Q208	8-729-900-33	TRANSISTOR DTC144EF		R032	1-247-847-00	CARBON 4.7K 5%	1/6W
Q209	8-729-900-33	TRANSISTOR DTC144EF		R033	1-247-863-00	CARBON 22K 5%	1/6W
Q210	8-729-900-33	TRANSISTOR DTC144EF		R034	1-247-871-00	CARBON 47K 5%	1/6W
Q301	8-729-245-83	TRANSISTOR 2SC2458		R035	1-247-807-00	CARBON 100 5%	1/6W
Q302	8-729-245-83	TRANSISTOR 2SC2458		R036	1-247-807-00	CARBON 100 5%	1/6W
Q303	8-729-117-54	TRANSISTOR 2SA1175		R038	1-247-831-00	CARBON 1K 5%	1/6W
Q304	8-729-117-54	TRANSISTOR 2SA1175		R039	1-247-831-00	CARBON 1K 5%	1/6W
Q305	8-729-245-83	TRANSISTOR 2SC2458		R040	1-247-831-00	CARBON 1K 5%	1/6W
Q306	8-729-245-83	TRANSISTOR 2SC2458		R044	1-247-815-00	CARBON 220 5%	1/6W
Q307	8-729-117-54	TRANSISTOR 2SA1175		R045	1-247-815-00	CARBON 220 5%	1/6W
Q308	8-729-245-83	TRANSISTOR 2SC2458		R046	1-247-815-00	CARBON 220 5%	1/6W
Q309	8-769-200-30	TRANSISTOR 2SK107-3		R047	1-247-815-00	CARBON 220 5%	1/6W
Q310	8-729-245-83	TRANSISTOR 2SC2458		R048	1-247-815-00	CARBON 220 5%	1/6W
Q311	8-729-117-54	TRANSISTOR 2SA1175		R049	1-247-815-00	CARBON 220 5%	1/6W
Q312	8-729-245-83	TRANSISTOR 2SC2458		R050	1-247-815-00	CARBON 220 5%	1/6W
Q313	8-729-117-54	TRANSISTOR 2SA1175		R051	1-247-799-00	CARBON 47 5%	1/6W
Q314	8-729-245-83	TRANSISTOR 2SC2458		R052	1-247-799-00	CARBON 47 5%	1/6W
Q315	8-729-245-83	TRANSISTOR 2SC2458		R053	1-247-799-00	CARBON 47 5%	1/6W
<u>RESISTOR</u>				R054	1-247-831-00	CARBON 1K 5%	1/6W
R001	1-247-831-00	CARBON 1K 5%	1/6W	R055	1-247-831-00	CARBON 1K 5%	1/6W
R002	1-247-841-00	CARBON 2.7K 5%	1/6W	R056	1-247-119-00	CARBON 330 5%	1/4W F
R003	1-247-831-00	CARBON 1K 5%	1/6W	R101	1-247-839-00	CARBON 2.2K 5%	1/6W
R004	1-247-841-00	CARBON 2.7K 5%	1/6W	R102	1-247-839-00	CARBON 2.2K 5%	1/6W
R005	1-247-857-00	CARBON 12K 5%	1/6W	R104	1-247-891-00	CARBON 330K 5%	1/6W
R006	1-247-871-00	CARBON 47K 5%	1/6W	R105	1-247-843-00	CARBON 3.3K 5%	1/6W
R007	1-247-863-00	CARBON 22K 5%	1/6W	R106	1-247-867-00	CARBON 33K 5%	1/6W
R008	1-247-863-00	CARBON 22K 5%	1/6W	R107	1-247-877-00	CARBON 82K 5%	1/6W
R009	1-247-863-00	CARBON 22K 5%	1/6W	R108	1-247-886-00	CARBON 200K 5%	1/6W
R010	1-247-863-00	CARBON 22K 5%	1/6W	R109	1-247-847-00	CARBON 4.7K 5%	1/6W
R011	1-247-831-00	CARBON 1K 5%	1/6W	R110	1-247-845-00	CARBON 3.9K 5%	1/6W
R012	1-247-863-00	CARBON 22K 5%	1/6W	R111	1-247-815-00	CARBON 220 5%	1/6W
R013	1-247-863-00	CARBON 22K 5%	1/6W	R112	1-247-831-00	CARBON 1K 5%	1/6W
R014	1-247-847-00	CARBON 4.7K 5%	1/6W	R113	1-247-815-00	CARBON 220 5%	1/6W
R015	1-247-663-00	CARBON 1.5K 5%	1/4W F	R114	1-247-837-00	CARBON 1.8K 5%	1/6W
R016	1-247-863-00	CARBON 22K 5%	1/6W	R115	1-247-841-00	CARBON 2.7K 5%	1/6W
R017	1-247-863-00	CARBON 22K 5%	1/6W	R117	1-247-835-00	CARBON 1.5K 5%	1/6W
				R118	1-247-901-00	CARBON 820K 5%	1/6W
				R151	1-247-879-00	CARBON 100K 5%	1/6W
				R152	1-247-879-00	CARBON 100K 5%	1/6W



Ref.No	Part No.	Description	Remark			Ref.No	Part No.	Description	Remark		
R153	1-247-863-00	CARBON	22K	5%	1/6W	R261	1-247-869-00	CARBON	39K	5%	1/6W
R154	1-247-857-00	CARBON	12K	5%	1/6W	R262	1-247-855-00	CARBON	10K	5%	1/6W
R202	1-247-829-00	CARBON	820	5%	1/6W	R263	1-247-857-00	CARBON	12K	5%	1/6W
R203	1-247-829-00	CARBON	820	5%	1/6W	R264	1-247-879-00	CARBON	100K	5%	1/6W
R204	1-247-829-00	CARBON	820	5%	1/6W	R265	1-247-879-00	CARBON	100K	5%	1/6W
R205	1-247-863-00	CARBON	22K	5%	1/6W	R266	1-247-871-00	CARBON	47K	5%	1/6W
R206	1-247-847-00	CARBON	4.7K	5%	1/6W	R270	1-247-855-00	CARBON	10K	5%	1/6W
R207	1-247-877-00	CARBON	82K	5%	1/6W	R271	1-247-855-00	CARBON	10K	5%	1/6W
R208	1-247-831-00	CARBON	1K	5%	1/6W	R272	1-247-855-00	CARBON	10K	5%	1/6W
R209	1-247-869-00	CARBON	39K	5%	1/6W	R273	1-247-855-00	CARBON	10K	5%	1/6W
R211	1-247-839-00	CARBON	2.2K	5%	1/6W	R274	1-247-835-00	CARBON	1.5K	5%	1/6W
R212	1-247-871-00	CARBON	47K	5%	1/6W	R275	1-247-887-00	CARBON	220K	5%	1/6W
R213	1-247-819-00	CARBON	330	5%	1/6W	R276	1-247-887-00	CARBON	220K	5%	1/6W
R214	1-247-819-00	CARBON	330	5%	1/6W	R277	1-247-855-00	CARBON	10K	5%	1/6W
R215	1-247-839-00	CARBON	2.2K	5%	1/6W	R278	1-247-855-00	CARBON	10K	5%	1/6W
R216	1-247-865-00	CARBON	27K	5%	1/6W	R279	1-247-825-00	CARBON	560	5%	1/6W
R217	1-247-863-00	CARBON	22K	5%	1/6W	R280	1-247-825-00	CARBON	560	5%	1/6W
R219	1-247-879-00	CARBON	100K	5%	1/6W	R281	1-247-775-00	CARBON	4.7	5%	1/6W
R220	1-247-879-00	CARBON	100K	5%	1/6W	R282	1-247-775-00	CARBON	4.7	5%	1/6W
R221	1-247-879-00	CARBON	100K	5%	1/6W	R283	1-247-871-00	CARBON	47K	5%	1/6W
R222	1-247-879-00	CARBON	100K	5%	1/6W	R284	1-247-847-00	CARBON	4.7K	5%	1/6W
R223	1-247-831-00	CARBON	1K	5%	1/6W	R285	1-247-847-00	CARBON	4.7K	5%	1/6W
R224	1-247-831-00	CARBON	1K	5%	1/6W	R301	1-247-805-00	CARBON	82	5%	1/6W
R225	1-247-831-00	CARBON	1K	5%	1/6W	R302	1-247-805-00	CARBON	82	5%	1/6W
R226	1-247-831-00	CARBON	1K	5%	1/6W	R303	1-247-821-00	CARBON	390	5%	1/6W
R227	1-247-863-00	CARBON	22K	5%	1/6W	R304	1-247-819-00	CARBON	330	5%	1/6W
R228	1-246-993-00	CARBON	470	5%	1/8W F	R305	1-247-863-00	CARBON	22K	5%	1/6W
R229	1-247-835-00	CARBON	1.5K	5%	1/6W	R306	1-247-851-00	CARBON	6.8K	5%	1/6W
R230	1-247-835-00	CARBON	1.5K	5%	1/6W	R307	1-247-833-00	CARBON	1.2K	5%	1/6W
R231	1-247-831-00	CARBON	1K	5%	1/6W	R308	1-247-831-00	CARBON	1K	5%	1/6W
R232	1-247-831-00	CARBON	1K	5%	1/6W	R309	1-247-867-00	CARBON	33K	5%	1/6W
R238	1-247-855-00	CARBON	10K	5%	1/6W	R310	1-247-871-00	CARBON	47K	5%	1/6W
R239	1-247-855-00	CARBON	10K	5%	1/6W	R311	1-247-831-00	CARBON	1K	5%	1/6W
R240	1-247-879-00	CARBON	100K	5%	1/6W	R312	1-247-813-00	CARBON	180	5%	1/6W
R241	1-247-879-00	CARBON	100K	5%	1/6W	R313	1-247-831-00	CARBON	1K	5%	1/6W
R242	1-247-879-00	CARBON	100K	5%	1/6W	R314	1-247-799-00	CARBON	47	5%	1/6W
R243	1-247-879-00	CARBON	100K	5%	1/6W	R316	1-247-855-00	CARBON	10K	5%	1/6W
R244	1-247-895-00	CARBON	470K	5%	1/6W	R317	1-247-818-00	CARBON	300	5%	1/6W
R246	1-247-887-00	CARBON	220K	5%	1/6W	R318	1-247-859-00	CARBON	15K	5%	1/6W
R247	1-247-887-00	CARBON	220K	5%	1/6W	R319	1-247-835-00	CARBON	1.5K	5%	1/6W
R248	1-247-855-00	CARBON	10K	5%	1/6W	R320	1-247-831-00	CARBON	1K	5%	1/6W
R249	1-247-855-00	CARBON	10K	5%	1/6W	R321	1-247-831-00	CARBON	1K	5%	1/6W
R250	1-247-895-00	CARBON	470K	5%	1/6W	R322	1-247-821-00	CARBON	390	5%	1/6W
R251	1-247-848-00	CARBON	5.1K	5%	1/6W	R324	1-247-831-00	CARBON	1K	5%	1/6W
R252	1-247-838-00	CARBON	2K	5%	1/6W	R325	1-247-831-00	CARBON	1K	5%	1/6W
R253	1-247-877-00	CARBON	82K	5%	1/6W	R326	1-247-833-00	CARBON	1.2K	5%	1/6W
R254	1-247-855-00	CARBON	10K	5%	1/6W	R327	1-247-835-00	CARBON	1.5K	5%	1/6W
R255	1-247-855-00	CARBON	10K	5%	1/6W	R328	1-247-835-00	CARBON	1.5K	5%	1/6W
R256	1-247-839-00	CARBON	2.2K	5%	1/6W	R329	1-247-831-00	CARBON	1K	5%	1/6W
R257	1-247-855-00	CARBON	10K	5%	1/6W	R330	1-247-829-00	CARBON	820	5%	1/6W
R258	1-247-807-00	CARBON	100	5%	1/8W F	R331	1-247-865-00	CARBON	27K	5%	1/6W
R259	1-247-887-00	CARBON	220K	5%	1/6W	R332	1-247-865-00	CARBON	27K	5%	1/6W
R260	1-247-876-00	CARBON	75K	5%	1/6W	R333	1-247-839-00	CARBON	2.2K	5%	1/6W
						R334	1-247-815-00	CARBON	220	5%	1/6W

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Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
R335	1-247-821-00	CARBON	390 5% 1/6W	RV202	1-228-727-00	RES, ADJ, CERAMIC CARBON 47K	
R336	1-247-815-00	CARBON	220 5% 1/6W	RV301	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K	
R337	1-247-821-00	CARBON	390 5% 1/6W	RV302	1-228-721-00	RES, ADJ, CERAMIC CARBON 2.2K	
R338	1-247-823-00	CARBON	470 5% 1/6W	RV303	1-228-719-00	RES, ADJ, CERAMIC CARBON 470	
R339	1-247-863-00	CARBON	22K 5% 1/6W	RV304	1-228-724-00	RES, ADJ, CERAMIC CARBON 10K	
R340	1-247-857-00	CARBON	12K 5% 1/6W	RV305	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K	
R341	1-247-847-00	CARBON	4.7K 5% 1/6W	RV306	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K	
R342	1-247-831-00	CARBON	1K 5% 1/6W				
R343	1-247-879-00	CARBON	100K 5% 1/6W			FILTER	
R344	1-247-807-00	CARBON	100 5% 1/6W	SF101	1-404-438-00	FILTER, SAW	
R345	1-247-855-00	CARBON	10K 5% 1/6W	SF201	1-436-287-00	SHIELD, SAWF	
R346	1-247-863-00	CARBON	22K 5% 1/6W			TRANSFORMER	
R347	1-247-887-00	CARBON	220K 5% 1/6W				
R348	1-247-839-00	CARBON	2.2K 5% 1/6W	T301	1-426-121-00	DAT	
R349	1-247-851-00	CARBON	6.8K 5% 1/6W			TUNER	
R350	1-247-877-00	CARBON	82K 5% 1/6W				
R351	1-247-843-00	CARBON	3.3K 5% 1/6W	TU101	1-463-421-21	TUNER, ET (BT-883)	
R352	1-247-831-00	CARBON	1K 5% 1/6W			CRYSTAL	
R353	1-247-851-00	CARBON	6.8K 5% 1/6W	X301	1-527-588-21	OSCILLATOR, CRYSTAL	
R354	1-247-849-00	CARBON	5.6K 5% 1/6W				
R355	1-247-839-00	CARBON	2.2K 5% 1/6W				
R356	1-247-843-00	CARBON	3.3K 5% 1/6W				
R357	1-247-855-00	CARBON	10K 5% 1/6W				
R358	1-247-859-00	CARBON	15K 5% 1/6W				
R359	1-247-855-00	CARBON	10K 5% 1/6W				
R360	1-247-851-00	CARBON	6.8K 5% 1/6W				
R361	1-247-843-00	CARBON	3.3K 5% 1/6W				
R362	1-247-871-00	CARBON	47K 5% 1/6W				
R363	1-247-903-00	CARBON	1M 5% 1/6W				
R364	1-247-851-00	CARBON	6.8K 5% 1/6W				
R365	1-247-885-00	CARBON	180K 5% 1/6W				
R366	1-247-849-00	CARBON	5.6K 5% 1/6W				
R367	1-247-807-00	CARBON	100 5% 1/6W				
R368	1-247-819-00	CARBON	330 5% 1/6W				
R369	1-247-819-00	CARBON	330 5% 1/6W				
R370	1-247-819-00	CARBON	330 5% 1/6W				
R371	1-247-843-00	CARBON	3.3K 5% 1/6W				
R372	1-247-843-00	CARBON	3.3K 5% 1/6W				
R373	1-247-843-00	CARBON	3.3K 5% 1/6W				
R374	1-247-855-00	CARBON	10K 5% 1/6W				
R375	1-247-807-00	CARBON	100 5% 1/6W				
R376	1-247-807-00	CARBON	100 5% 1/6W				
R377	1-247-871-00	CARBON	47K 5% 1/6W				
R378	1-247-839-00	CARBON	2.2K 5% 1/6W				
R379	1-247-839-00	CARBON	2.2K 5% 1/6W				
R380	1-247-841-00	CARBON	2.7K 5% 1/6W				
R381	1-247-831-00	CARBON	1K 5% 1/6W				
R382	1-247-828-00	CARBON	750 5% 1/6W				
R383	1-247-831-00	CARBON	1K 5% 1/6W				
		VARIABLE RESISTOR					
RV101	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K					
RV201	1-228-727-00	RES, ADJ, CERAMIC CARBON 47K					
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NOTE:

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
Q703	8-729-322-78	TRANSISTOR 2SC2278		C504	1-108-365-00	MYLAR 0.001MF 10% 100V	
<u>RESISTOR</u>				C505	1-108-381-00	MYLAR 0.022MF 10% 100V	
R701	1-215-134-00	METAL 180 5% 1/4W		C506	1-108-379-00	MYLAR 0.015MF 10% 100V	
R702	1-215-168-00	METAL 4.7K 5% 1/4W		C507	1-102-989-00	CERAMIC 68PF 5% 500V	
R703	1-206-692-00	METAL OXIDE 15K 5% 2W F		C508	1-123-380-00	ELECT 1MF 20% 50V	
R704	1-215-168-00	METAL 4.7K 5% 1/4W		C509	1-123-380-00	ELECT 1MF 20% 50V	
R705	1-215-134-00	METAL 180 5% 1/4W		C510	1-108-381-00	MYLAR 0.022MF 10% 100V	
R706	1-206-692-00	METAL OXIDE 15K 5% 2W F		C511	1-106-180-00	MYLAR 0.0022MF 5% 100V	
R707	1-215-138-00	METAL 270 5% 1/4W		C512	1-129-794-00	FILM 0.0033MF 5% 100V	
R708	1-215-168-00	METAL 4.7K 5% 1/4W		C513	1-123-336-00	ELECT 470MF 20% 25V	
R709	1-206-692-00	METAL OXIDE 15K 5% 2W F		C516	1-108-595-00	MYLAR 0.047MF 5% 50V	
R710	1-202-824-00	SOLID 3.3K 1/2W		C517	1-102-228-00	CERAMIC 470PF 10% 500V	
R711	1-202-837-00	SOLID 82K 1/2W		C518	1-123-356-00	ELECT 10MF 20% 25V	
R713	1-202-824-00	SOLID 3.3K 1/2W		C519	1-131-367-00	TANTALUM 22MF 10% 20V	
R714	1-202-609-00	SOLID 33K 1/2W		C521	1-130-640-00	FILM 0.47MF 5% 50V	
R715	1-202-841-00	SOLID 180K 1/2W		C522	1-123-379-00	ELECT 0.47MF 20% 50V	
R716	1-202-824-00	SOLID 3.3K 1/2W		C523	1-123-380-00	ELECT 1MF 20% 50V	
R717	1-202-719-00	SOLID 1M 10% 1/2W		C524	1-108-377-00	MYLAR 0.01MF 10% 100V	
R718	1-202-549-00	SOLID 100 10% 1/2W		C525	1-123-380-00	ELECT 1MF 20% 50V	
R719	1-202-842-00	SOLID 220K 1/2W		C526	1-108-384-00	MYLAR 0.039MF 10% 100V	
R720	1-202-846-00	SOLID 470K 1/2W		C527	1-108-367-00	MYLAR 0.0015MF 10% 100V	
R721	1-202-848-00	SOLID 680K 1/2W		C528	1-123-380-00	ELECT 1MF 20% 50V	
R722	1-215-128-00	METAL 100 5% 1/4W		C529	1-108-198-00	MYLAR 0.012MF 10% 100V	
R723	1-215-128-00	METAL 100 5% 1/4W		C531	1-123-322-00	ELECT 330MF 20% 16V	
R724	1-215-128-00	METAL 100 5% 1/4W		C533	1-123-360-00	ELECT 100MF 20% 50V	
<u>VARIABLE RESISTOR</u>				C534	1-108-377-00	MYLAR 0.01MF 10% 100V	
RV701	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K		C535	1-108-372-00	MYLAR 0.0039MF 10% 100V	
RV702	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K		C536	1-124-192-00	ELECT 4.7MF 20% 50V	
RV703	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K		C537	1-108-377-00	MYLAR 0.01MF 10% 100V	
RV704	1-228-717-00	RES, ADJ, CERAMIC CARBON 220		C538	1-108-385-00	MYLAR 0.047MF 10% 100V	
RV705	1-228-717-00	RES, ADJ, CERAMIC CARBON 220		C539	1-101-810-00	CERAMIC 100PF 5% 500V	
RV706	1-226-114-00	RES, ADJ, METAL GLAZE 2.2M		C540	1-108-365-00	MYLAR 0.001MF 10% 100V	
RV707	1-226-114-00	RES, ADJ, METAL GLAZE 2.2M		C541	1-161-961-11	CERAMIC 0.0022MF 10% 3KV	
<u>SPARK GAP</u>				C542	1-108-387-00	MYLAR 0.068MF 10% 100V	
SG701	1-519-063-XX	DISCHARGING GAP		C543	1-130-956-11	FILM 0.0133MF 3% 1.2KV	
SG702	1-519-063-XX	DISCHARGING GAP		C544	1-130-959-00	FILM 0.047MF 5% 400V	
SG703	1-519-063-XX	DISCHARGING GAP		C545	1-102-223-00	CERAMIC 0.0047MF 20% 1.6KV	
SG704	1-519-063-XX	DISCHARGING GAP		C546	1-123-254-00	ELECT 10MF 20% 250V	
SG705	1-519-063-XX	DISCHARGING GAP		C547	1-102-038-00	CERAMIC 0.001MF 500V	
SG706	1-519-063-XX	DISCHARGING GAP		C548	1-123-357-00	ELECT 22MF 20% 50V	
*****				C549	1-123-334-00	ELECT 220MF 20% 25V	
▲:A-1345-385-A D BOARD, COMPLETE				C550	1-123-333-00	ELECT 100MF 20% 25V	
*****				C551	1-102-038-00	CERAMIC 0.001MF 500V	
<u>CAPACITOR</u>				C552	1-123-346-00	ELECT 220MF 20% 35V	
C501	1-123-024-00	ELECT 33MF 160V		C553	1-108-381-00	MYLAR 0.022MF 10% 100V	
C502	1-123-333-00	ELECT 100MF 20% 25V		C554	1-108-385-00	MYLAR 0.047MF 10% 100V	
C503	1-108-385-00	MYLAR 0.047MF 10% 100V		C555	1-123-332-00	ELECT 47MF 20% 16V	
				C556	1-123-332-00	ELECT 47MF 20% 16V	
				C557	1-130-547-00	FILM 1.5MF 5% 200V	
				C558	1-136-105-00	MYLAR 0.33MF 10% 250V	
				C559	1-108-377-00	MYLAR 0.01MF 10% 100V	
				C560	1-130-547-00	FILM 1.5MF 5% 200V	
				C561	1-123-356-00	ELECT 10MF 20% 25V	

NOTE:

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
C562	1-102-002-00	CERAMIC 680PF 10%	500V	<u>TRANSISTOR</u>			
C563	1-123-379-00	ELECT 0.47MF 20%	50V	Q501	8-729-245-83	TRANSISTOR 2SC2458	
C564	1-101-003-00	CERAMIC 0.0047MF	50V	Q502	8-729-168-82	TRANSISTOR 2SC2688	
C565	1-108-381-00	MYLAR 0.022MF 10%	100V	Q503	8-729-341-34	TRANSISTOR 2SC1413A	
C566	1-108-377-00	MYLAR 0.01MF 10%	100V		3-701-609-00	BUSHING (B), TR, Q503	
<u>CONNECTOR</u>					▲:4-314-938-01	RETAINER (TO-3), TRANSISTOR, Q503	
D1	▲:1-508-765-00	3P PLUG (M)			▲:4-329-407-00	LUG, GROUND, Q503	
D2	▲:1-560-224-00	PLUG, CONNECTOR (2.5MM) 10P			▲:4-336-010-00	HEAT SINK, Q503	
D3	▲:1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P			▲:4-362-210-00	SHEET (TO-3), Q503	
D4	▲:1-508-786-00	2P PLUG (M)		Q509	8-729-313-42	TRANSISTOR 2SD1134	
D5	▲:1-508-767-00	5P PLUG			▲:4-323-833-00	HEAT SINK, PIN OUT, Q509	
D6	▲:1-508-784-00	1P PLUG		<u>RESISTOR</u>			
D7	▲:1-508-784-00	1P PLUG		R501	1-206-692-00	METAL OXIDE 15K 5% 2W	F
D8	▲:1-508-784-00	1P PLUG		R502	1-215-140-00	METAL 330 5% 1/4W	
<u>DIODE</u>				R503	1-247-613-00	CARBON 6.8K 5% 1/8W	
D501	8-719-911-19	DIODE ISS119		R504	1-215-198-00	METAL 82K 5% 1/4W	
D502	8-719-911-19	DIODE ISS119		R505	1-215-164-00	METAL 3.3K 5% 1/4W	
D504	8-719-911-19	DIODE ISS119		R506	1-247-168-00	METAL 36K 5% 1/4W	
D506	8-719-300-45	DIODE EM1Z		R507	1-215-178-00	METAL 12K 5% 1/4W	
D507	8-719-305-15	DIODE GH3F		R511	1-215-140-00	METAL 330 5% 1/4W	
D508	8-719-928-08	DIODE ERD28-08		R512	1-214-768-00	METAL 43K 1% 1/4W	
D509	8-719-903-09	DIODE V30N		R513	1-215-168-00	METAL 4.7K 5% 1/4W	
D510	8-719-300-76	DIODE RH1A		R514	1-215-182-00	METAL 18K 5% 1/4W	
D511	8-719-901-93	DIODE V19E		R515	1-215-168-00	METAL 4.7K 5% 1/4W	
D512	8-719-901-93	DIODE V19E		R516	1-215-168-00	METAL 4.7K 5% 1/4W	
D513	8-719-901-93	DIODE V19E		R517	1-212-363-00	METAL OXIDE 1.8 5% 1W	F
D514	8-719-300-45	DIODE EM1Z		R518	1-215-142-00	METAL 390 5% 1/4W	
D515	8-719-300-45	DIODE EM1Z		R519	1-215-162-00	METAL 2.7K 5% 1/4W	
<u>DELAY LINE</u>				R520	1-214-770-00	METAL 51K 1% 1/4W	
DY1	▲:1-506-348-XX	3P PLUG (L)		R521	1-215-148-00	METAL 680 5% 1/4W	
DY2	▲:1-506-348-XX	3P PLUG (L)		R522	1-247-120-00	METAL 360 5% 1/4W	
<u>IC</u>				R523	1-214-755-00	METAL 12K 1% 1/4W	
IC501	8-759-100-60	IC UPC1377C		R524	1-214-759-00	METAL 18K 1% 1/4W	
IC502	8-759-113-78	IC UPC1378H-L		R525	1-215-194-00	METAL 56K 5% 1/4W	
IC503	8-759-905-39	IC TDA1082		R526	1-215-162-00	METAL 2.7K 5% 1/4W	
IC505	8-759-700-06	IC NJM7812B		R527	1-215-166-00	METAL 3.9K 5% 1/4W	
	▲:4-348-704-00	HEAT SINK (A), IC505		R528	1-215-138-00	METAL 270 5% 1/4W	
<u>COIL</u>				R530	1-206-694-00	METAL OXIDE 18K 5% 2W	F
L502	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE 3.3MMH		R531	1-215-198-00	METAL 82K 5% 1/4W	
L503	1-408-225-00	MICRO INDUCTOR 3.3UH		R532	1-215-152-00	METAL 1K 5% 1/4W	
L504	1-407-365-00	COIL, CHOKE (HIGH FREQUENCY) 0.7UH		R533	1-247-095-00	METAL 33 5% 1/4W	
L505	1-459-104-00	COIL, DUST CORE 10MMH		R544	1-215-200-00	METAL 100K 5% 1/4W	
L506	1-408-242-00	MICRO INDUCTOR 10MMH		R545	1-215-180-00	METAL 15K 5% 1/4W	
L507	1-459-241-00	COIL, HORIZONTAL LINIALITY		R546	1-215-176-00	METAL 10K 5% 1/4W	
L508	1-459-390-00	COIL (WITH CORE)		R547	1-215-148-00	METAL 680 5% 1/4W	
L509	1-408-240-00	MICRO INDUCTOR 6.8MMH		R551	1-247-783-00	CARBON 10 5% 1/8W	F
				R552	1-213-137-00	METAL OXIDE 330 5% 1W	F
				R553	1-213-137-00	METAL OXIDE 330 5% 1W	F
				R554	1-215-174-00	METAL 8.2K 5% 1/4W	
				R555	1-215-188-00	METAL 33K 5% 1/4W	
				R556	1-215-194-00	METAL 56K 5% 1/4W	
				R557	1-215-182-00	METAL 18K 5% 1/4W	

Ref.No	Part No.	Description	Remark
R558	1-215-182-00	METAL 18K 5% 1/4W	
R559	1-215-169-00	METAL 5.1K 5% 1/4W	
R560	1-215-167-00	METAL 4.3K 5% 1/4W	
R561	1-215-196-00	METAL 68K 5% 1/4W	
R562	1-215-182-00	METAL 18K 5% 1/4W	
R563	1-215-136-00	METAL 220 5% 1/4W	
R564	1-215-176-00	METAL 10K 5% 1/4W	
R565	1-215-192-00	METAL 47K 5% 1/4W	
R566	1-215-130-00	METAL 120 5% 1/4W	
R567	1-205-642-00	CEMENTED 3.3K 10% 5W	
R568	1-246-995-00	CARBON 1.8K 5% 1/8W F	
R569	1-247-831-00	CARBON 1K 5% 1/8W F	
R570	1-246-979-00	CARBON 1.2 5% 1/8W F	
R571	1-247-636-00	CARBON 0.47 5% 1/8W F	
R573	1-247-636-00	CARBON 0.47 5% 1/8W F	
R574	1-202-407-15	SOLID 10K 5% 1/4W	
R575	1-215-170-00	METAL 5.6K 5% 1/4W	
R576	1-214-779-00	METAL 120K 1% 1/4W	
R577	1-212-371-00	METAL OXIDE 8.2 5% 1W F	
R578	1-213-132-00	METAL OXIDE 120 5% 1W F	
R579	1-213-147-00	METAL OXIDE 2.2K 5% 1W F	
R599	1-247-131-00	METAL 1K 5% 1/4W	
<u>VARIABLE RESISTOR</u>			
RV501	1-224-251-XX	RES, ADJ, METAL GLAZE 4.7K	
RV502	1-228-719-00	RES, ADJ, CERAMIC CARBON 470	
RV504	1-224-248-XX	RES, ADJ, METAL GLAZE 470	
RV505	1-228-718-00	RES, ADJ, CERAMIC CARBON 330	
RV506	1-228-721-00	RES, ADJ, CERAMIC CARBON 2.2K	
RV507	1-228-724-00	RES, ADJ, CERAMIC CARBON 10K	
RV508	1-223-102-00	RES, ADJ, WIREWOUND 120	
<u>SPARK GAP</u>			
SG501	1-519-063-XX	DISCHARGING GAP	
<u>TRANSFORMER</u>			
T501	1-437-078-00	TRANSFORMER, HORIZONTAL DRIVE	
T503	1-421-520-00	TRANSFORMER, FERRITE (PHT)	

♣:1-610-004-00 J2 BOARD			

<u>CAPACITOR</u>			
C951	1-101-003-00	CERAMIC 0.0047MF	50V
C952	1-101-003-00	CERAMIC 0.0047MF	50V
<u>CONNECTOR</u>			
J4	♣:1-560-278-00	PLUG, CONNECTOR 3P	
J5	♣:1-560-278-00	PLUG, CONNECTOR 4P	

Ref.No	Part No.	Description	Remark
<u>JACK</u>			
J951	1-507-657-00	JACK	
<u>RESISTOR</u>			
R951	1-244-865-00	CARBON 470 5% 1/2W	
R952	1-244-865-00	CARBON 470 5% 1/2W	

♣:1-610-005-00 J3 BOARD			

<u>CONNECTOR</u>			
J6	♣:1-508-766-00	4P PLUG (M)	
J7	♣:1-556-555-00	CONNECTOR, BOARD IN 5P	

♣:1-610-003-00 J1 BOARD			

<u>CAPACITOR</u>			
C901	1-101-003-00	CERAMIC 0.0047MF	50V
C902	1-101-003-00	CERAMIC 0.0047MF	50V
C903	1-102-973-00	CERAMIC 100PF	50V
C904	1-102-973-00	CERAMIC 100PF	50V
C905	1-101-003-00	CERAMIC 0.0047MF	50V
C906	1-101-003-00	CERAMIC 0.0047MF	50V
C907	1-110-182-81	MYLAR 0.022MF	10% 250V
C908	1-110-182-81	MYLAR 0.022MF	10% 250V
<u>CONNECTOR</u>			
J1	♣:1-560-278-00	PLUG, CONNECTOR 10P	
J2	♣:1-560-278-00	PLUG, CONNECTOR 3P	
J3	♣:1-560-278-00	PLUG, CONNECTOR 4P	
J8	♣:1-560-278-00	PLUG, CONNECTOR 3P	
<u>JACK</u>			
J901	1-526-728-00	SOCKET, SPEAKER	
J902	1-526-728-00	SOCKET, SPEAKER	
J903	1-561-580-21	JACK, DIN 6P	
J904	1-562-119-00	CONNECTOR (REC P/B) 5P	
<u>RESISTOR</u>			
R901	1-247-831-00	CARBON 1K 5% 1/6W	
R902	1-247-823-00	CARBON 470 5% 1/6W	
R903	1-247-823-00	CARBON 470 5% 1/6W	

♣:1-610-001-00 H BOARD			

♣:4-366-807-00 COVER (C), LED HOLDER			

NOTE:

The components identified by shading and mark ♣ are critical for safety. Replace only with part number specified.



Ref.No	Part No.	Description	Remark	Ref.No	Part No.	Description	Remark
<u>CAPACITOR</u>							
C401	1-123-612-00	ELECT 2.2MF 20%	50V	R416	1-247-833-00	CARBON 1.2K 5% 1/6W	
C402	1-123-608-00	ELECT 0.22MF 20%	50V	R417	1-247-831-00	CARBON 1K 5% 1/6W	
<u>DIODE</u>				R418	1-247-831-00	CARBON 1K 5% 1/6W	
D401	8-719-911-19	DIODE 1SS119		R419	1-247-839-00	CARBON 2.2K 5% 1/6W	
D402	8-719-911-19	DIODE 1SS119		R421	1-247-831-00	CARBON 1K 5% 1/6W	
D403	8-719-911-19	DIODE 1SS119		R423	1-247-807-00	CARBON 100 5% 1/6W	
D404	8-719-911-19	DIODE 1SS119		R425	1-247-811-00	CARBON 150 5% 1/6W	
D405	8-719-911-19	DIODE 1SS119		R427	1-247-863-00	CARBON 22K 5% 1/6W	
D406	8-719-911-19	DIODE 1SS119		R428	1-247-863-00	CARBON 22K 5% 1/6W	
D407	8-719-911-19	DIODE 1SS119		R430	1-247-863-00	CARBON 22K 5% 1/6W	
D408	8-719-911-19	DIODE 1SS119		R431	1-247-847-00	CARBON 4.7K 5% 1/6W	
D409	8-719-911-19	DIODE 1SS119		R432	1-247-847-00	CARBON 4.7K 5% 1/6W	
D410	8-719-911-19	DIODE 1SS119		R433	1-247-847-00	CARBON 4.7K 5% 1/6W	
D411	8-719-911-19	DIODE 1SS119		R434	1-247-863-00	CARBON 22K 5% 1/6W	
LED401	8-719-803-20	DIODE TLR320		R435	1-247-871-00	CARBON 47K 5% 1/6W	
▲:1-526-634-00		SOCKET, IC (8P), LED401		R436	1-247-863-00	CARBON 22K 5% 1/6W	
LED402	8-719-901-96	DIODE SLP161B		R437	1-247-857-00	CARBON 12K 5% 1/6W	
▲:4-362-295-00		HOLDER (C), LED ,LED402		R439	1-247-849-00	CARBON 5.6K 5% 1/6W	
LED404	8-719-800-24	DIODE TLR147		R440	1-247-861-00	CARBON 18K 5% 1/6W	
▲:4-362-207-00		HOLDER (P), LED, LED404		<u>VARIABLE RESISTOR</u>			
LED406	8-719-901-96	DIODE SLP161B		RV401	1-228-540-00	RES, VAR, CARBON 10K	
▲:4-357-812-00		HOLDER, LED, LED406		RV402	1-228-539-00	RES, VAR, CARBON 10K	
▲:4-362-219-00		COVER (W), LED HOLDER, LED406		RV403	1-228-539-00	RES, VAR, CARBON 10K	
LED408	8-719-901-96	DIODE SLP161B		RV404	1-228-539-00	RES, VAR, CARBON 10K	
▲:4-362-295-00		HOLDER (C), LED, LED408		RV405	1-228-539-00	RES, VAR, CARBON 10K	
LED409	8-719-901-96	DIODE SLP161B		RV406	1-228-539-00	RES, VAR, CARBON 10K	
▲:4-362-295-00		HOLDER (C), LED, LED409		RV407	1-228-539-00	RES, VAR, CARBON 10K	
<u>TRANSISTOR</u>				RV408	1-228-539-00	RES, VAR, CARBON 10K	
Q401	8-729-117-54	TRANSISTOR 2SA1175		RV409	1-228-540-00	RES, VAR, CARBON 10K	
Q402	8-729-245-83	TRANSISTOR 2SC2458		<u>SWITCH</u>			
Q403	8-729-245-83	TRANSISTOR 2SC2458		S401	1-552-774-00	SWITCH, PUSH	
Q404	8-729-117-54	TRANSISTOR 2SA1175		S402	1-552-774-00	SWITCH, PUSH	
Q405	8-729-245-83	TRANSISTOR 2SC2458		S403	1-552-774-00	SWITCH, PUSH	
Q408	8-729-245-83	TRANSISTOR 2SC2458		S404	1-552-774-00	SWITCH, PUSH	
Q409	8-729-245-83	TRANSISTOR 2SC2458		S405	1-552-774-00	SWITCH, PUSH	
<u>RESISTOR</u>				S406	1-552-774-00	SWITCH, PUSH	
R401	1-247-861-00	CARBON 18K 5% 1/6W		S407	1-552-774-00	SWITCH, PUSH	
R402	1-247-827-00	CARBON 680 5% 1/6W		S408	1-552-774-00	SWITCH, PUSH	
R403	1-247-831-00	CARBON 1K 5% 1/6W		S409	1-552-774-00	SWITCH, PUSH	
R404	1-247-865-00	CARBON 27K 5% 1/6W		S410	1-552-774-00	SWITCH, PUSH	
R405	1-247-863-00	CARBON 22K 5% 1/6W		S411	1-552-774-00	SWITCH, PUSH	
R406	1-247-867-00	CARBON 33K 5% 1/6W		S412	1-554-118-00	SWITCH, PUSH	
R407	1-247-843-00	CARBON 3.3K 5% 1/6W		S413	1-554-118-00	SWITCH, PUSH	
R408	1-247-863-00	CARBON 22K 5% 1/6W		*****			
R409	1-247-863-00	CARBON 22K 5% 1/6W		▲:1-606-794-00		N BOARD	
R411	1-247-871-00	CARBON 47K 5% 1/6W		*****			
R413	1-247-895-00	CARBON 470K 5% 1/6W		▲:4-342-117-00		CASE, SHIELD (MAIN), R	
R415	1-247-863-00	CARBON 22K 5% 1/6W		▲:4-342-118-00		LID, SHIELD CASE, R	

Ref.No	Part No.	Description	Remark
<u>CAPCITOR</u>			
C1	1-123-617-00	ELECT 10MF 20% 16V	
C2	1-123-617-00	ELECT 10MF 20% 16V	
C3	1-123-617-00	ELECT 10MF 20% 16V	
C4	1-161-019-00	CERAMIC 0.033MF 10% 25V	
C5	1-108-567-00	MYLAR 0.0033MF 5% 50V	
C6	1-123-821-00	ELECT 47MF 20% 16V	
<u>DIODE</u>			
D1	8-719-110-32	DIODE PH302B	
<u>IC</u>			
IC1	8-759-113-73	IC UPC1373H	
<u>COIL</u>			
L1	1-404-310-00	COIL 4.7MMH	

MISCELLANEOUS

△	1-228-714-21	RESISTOR ASSY, HIGH-VOLTAGE
△	1-451-204-31	DEFLECTION YOKE
	1-452-032-00	MAGNET, DISK; 10MM ø
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ø
	1-452-146-00	MAGNET, BMC
△	1-536-797-11	TERMINAL BOARD ASSY, ANTENNA
	1-543-179-00	CORE, RING
△	1-551-270-31	CORD, POWER
♣	1-551-604-00	CONNECTOR ASSY, MINIATURE 3P
♣	1-551-612-00	CONNECTOR ASSY, MINIATURE (2P)
♣	1-551-614-00	CONNECTOR ASSY, MINIATURE 2P
♣	1-551-674-00	CONNECTOR ASSY 3P
♣	1-551-796-00	CONNECTOR ASSY (2.5MM) 6P
♣	1-551-922-00	CONNECTOR ASSY 3P
♣	1-555-817-00	CONNECTOR ASSY (2.5MM) 4P
♣	1-556-017-00	CONNECTOR ASSY (2.5MM) 3P
♣	1-556-322-00	CONNECTOR ASSY (2.5MM) 6P
♣	1-556-325-00	CONNECTOR ASSY (2.5MM) 4P
♣	1-556-405-00	CONNECTOR, MINIATURE 2P
♣	1-556-408-00	CONNECTOR ASSY (LARGE) 3P
♣	1-556-412-00	CONNECTOR ASSY (2.5MM) 4P
♣	1-556-651-00	CONNECTOR ASSY (2.5MM) 4P
♣	1-556-879-00	CONNECTOR ASSY (2.5MM) 10P
L901	△ 1-426-087-61	COIL, DEGAUSSING
L902	△ 1-426-087-61	COIL, DEGAUSSING
S901	△ 1-553-225-12	SWITCH, PUSH
SP901	1-503-194-00	SPEAKER
SP902	1-503-194-00	SPEAKER
T502	△ 1-439-303-00	TRANSFORMER ASSY, FLYBACK
V901	△ 8-738-704-05	CRT 520SB22

Ref.No	Part No.	Description	Remark
ACCESSORIES AND PACKING MATERIALS *****			
	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
	A-1470-625-A	COMMANDER ASSY (RM-635)	
	3-701-360-00	LABEL, TACK	
	4-362-269-00	BAG, PROTECTION	
	4-362-270-00	CUSHION (UPPER) (ASSY)	
	4-362-271-00	CUSHION (LOWER) (ASSY)	
	4-364-504-00	INDIVIDUAL CARTON	
	4-491-710-10	INSTRUCTION, TELETXT	
	4-493-822-11	MANUAL, INSTRUCTION	

NOTE:

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

SECTION 6

TELETEXT UNIT (V BOARD)

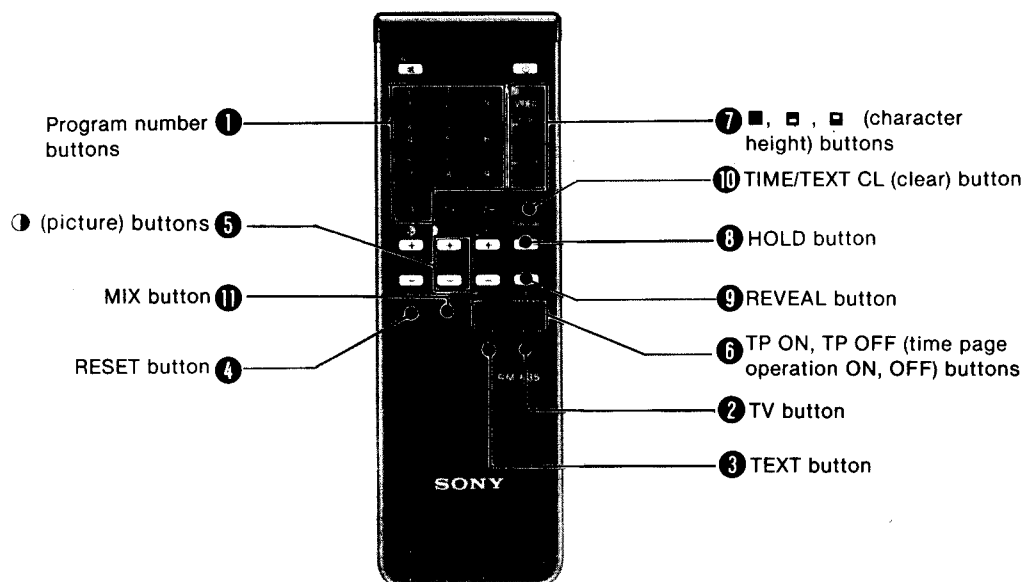
6-1. TO VIEW THE TELETEXT SERVICE

BEFORE OPERATION

- First select the TV channel for the desired teletext service, then press the TEXT button. After you have pressed the TEXT button, the TV channel cannot be changed.
- To receive the teletext service of a different TV station, first restore the TV mode with the TV or RESET button, then select the new station.
- To avoid a malfunction in the teletext mode, do not operate any button which is not described here. If you become confused during the operation, press the RESET button and start again.
- In the teletext mode, be sure to keep the AFT ON button of the TV activated. Otherwise, misoperation may occur.

6-2. TO ENJOY TELETEXT PROGRAMMES

RM-635



❶ Programme number buttons

Enable corresponding digits (0-9) to be entered into the teletext memory for page number and time.

See "Example two, six or seven".

❷ TV button

Press this button to change the receiver from the teletext mode to the TV mode.

❸ TEXT button

Press this button to change the receiver from the TV mode to the teletext mode.

❹ RESET button

Press this button to cancel all functions and change the receiver from the teletext mode to the TV mode.

❺ (picture) buttons

The brightness of the teletext display is adjusted with these buttons.

❻ TP ON, TP OFF (timed page operation ON, OFF) buttons

When the TP ON button is pressed, the teletext memory will capture a selected page at a preset time. This function can be useful if information on a particular page changes throughout the day. Press the TP OFF button to cancel the timed page operation.

See "Example seven".

❼ ■, ■, ■ (character height) buttons

■ button-Enlarges top half of the teletext display.

■ button-Enlarges bottom half of the teletext display.

■ button-Restores normal character height.

See "Example five".

❽ HOLD button

Enables the requested page to be held so that it cannot be updated.

See "Example three".

❾ REVEAL button

Displays the answers in a quiz page.

See "Example eight".

❿ TIME/TEXT CL (clear) button

This button suppresses the teletext display and restores the normal TV picture.

See "Example six".

This button enables the time to be displayed in the TV mode.

This time is the same as the time indication in the TEXT mode (top right hand corner). The time display will continue for 5 seconds after the release of the button.

If no teletext service is broadcast on the selected channel, the time will not be displayed.

⓫ MIX button

Superimposes the teletext display on the normal TV picture of the selected channel.

See "Example four".

EXAMPLES OF OPERATION

Example one

TO DISPLAY THE INDEX PAGE

Press the TEXT button. If this is the first time the receiver has been put in the teletext mode since being switched on, the index page of the selected teletext service will automatically appear on the screen. If it is not the first time, key in three-digit teletext service index page number using the programme number buttons. Proceed to "Example two"

Example two

TO OBTAIN A DESIRED TELETEXT PAGE

Key in the correct three digits for the required page. The header display at the top of the page will turn green to show that the teletext adaptor is waiting for the page you have requested to be broadcast. When that page is next transmitted, it will be displayed on the screen. If an error is made in keying the page number, complete the three-digit sequence by keying in any digit. Then re-key the correct page number.



Example three

TO STOP THE PAGE

Press the HOLD button and the teletext adaptor will stop entering any new pages into its memory. The mode is indicated in green at the top right hand corner.

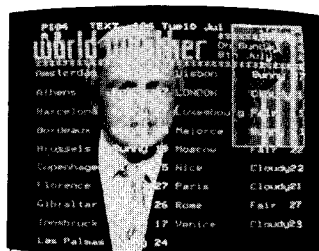


This button may be used also with "Subpages". See page 7.
To resume normal teletext operation, press TEXT button.

Example four



TO SUPERIMPOSE THE TELETEXT PAGE ON THE NORMAL TV PICTURE

Press the MIX button. To restore normal teletext operation, press the TEXT button. To restore normal TV operation, press the TV button. The MIX button can be used in either the teletext mode or the normal TV mode.



Example five

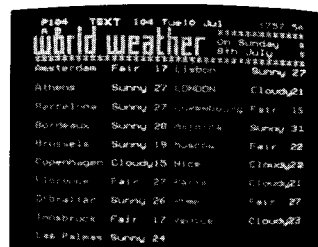
TO ENLARGE THE TELETEXT DISPLAY


The  and  buttons enlarge the teletext display to twice its normal height.

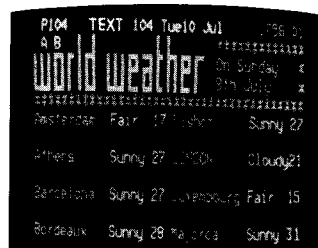
This method is very convenient for long distance viewing or for people with poor eyesight.


To enlarge the display.

1 Obtain a teletext display on the screen.



2 Operate the  button. The top half of the page will now be enlarged to fill the entire screen.



3 Operate the  button. The lower half of the page will now be enlarged to fill the entire screen.



To return the normal character height, press the  button.

If you request another page while the lower section of a page is being displayed, the top half only of the requested page will automatically be displayed.

**Example
six**

**TO WATCH A NORMAL TV PROGRAMME WHILE
THE TELETEXT ADAPTOR IS SEARCHING FOR
YOUR DESIRED PAGE**

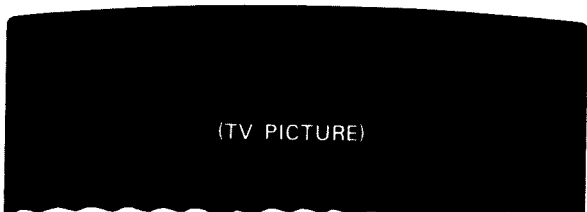
- 1 Obtain a teletext display on the screen.



- 2 Now, request another page. The page header will turn green while the adaptor is waiting for the page to be transmitted.



- 3 Press the TEXT CL button and the normal TV picture will be restored. (The page header will be displayed for the first few seconds).



Leave the set in this mode. When your requested page has been captured by the adaptor, the page number will be shown in the top left hand corner.



If you wish to view this requested page, press the TEXT button.

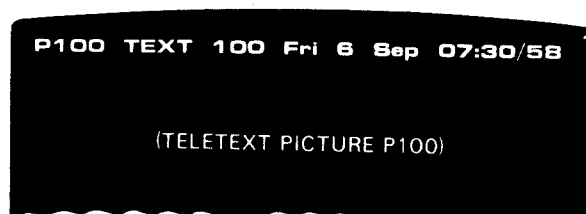


**Example
seven**

**TO HAVE A REQUESTED PAGE BROADCAST AT A
PREDETERMINED TIME**

The time coding facility enables you to select and store a page of text for display at some predetermined time. It may be used therefore to provide an accurate visual alarm feature reminding you that you wished to do something at a particular time e.g. when programmes on two TV channels overlap it could remind you to change channels at the correct time.

- 1 Obtain a teletext display on the screen by pressing the TEXT button.



- 2 Enter new page request.



- 3 Press the TP ON button.

As soon as the TP ON button is pressed, the time display on the top right of the screen starts flashing.



- 4 Immediately enter your request time using four digits, for example 07:35.



- 5 Leave the set in this mode. The teletext adaptor will not capture your requested page until the present time and the preset time correspond. When they do correspond, the requested page will be entered into the teletext memory and displayed on the screen.

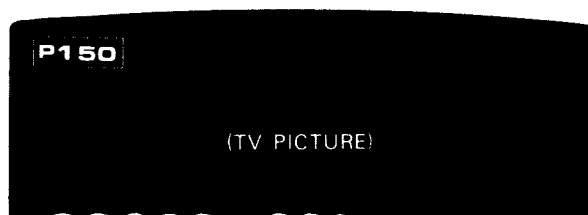


To watch the normal TV picture while waiting for your requested page to be displayed.

- 6 Press the TEXT CL button. The page header will be displayed for the first few seconds.



- 7 When the requested page has been captured, it will be indicated on the screen. To display the requested teletext page, press the TEXT button.



To cancel the timed page operation, press the TP OFF button in the teletext mode.

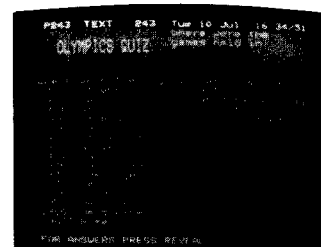
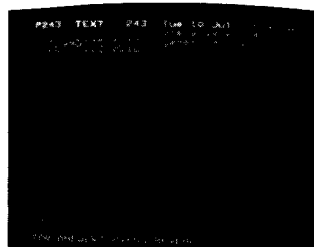
Notes

- The timed text facility can only be set up in the text mode of operation.
- Not all transmitted pages of teletext will allow operation of the timed text facility.
- Timed text operation will not be completed if the received channel is changed after selecting timed text mode.

Example eight

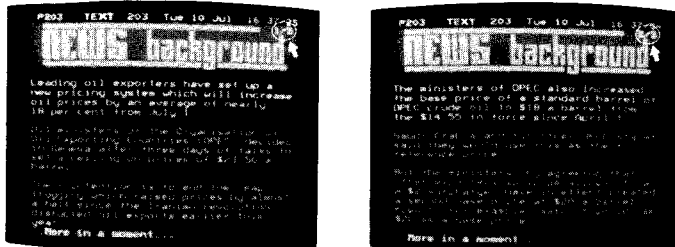
TO REVEAL ANSWERS TO A QUIZ

When parts of a quiz page are deliberately concealed on the first display, press the REVEAL button to see the answers. As long as this button is depressed, all parts of the page are displayed.



OTHER TYPES OF TELETEXT PAGES


Subpages—Each main page may be divided up into several subpages (usually marked 1/3, 2/3, and then 3/3). The time that a particular subpage is displayed should be long enough for you to read the full display. The next subpage will automatically be displayed as soon as it is broadcast. If the display time of a page is too short, use the HOLD button to cancel the automatic display of the next subpage.



Newsflash and subtitle pages—These pages are superimposed on the normal TV picture. They usually contain brief information. Select these pages in the teletext mode and press the TEXT CL button. Updated newsflashes will be automatically displayed on the screen.



Picture adjustment

The picture level of the background normal TV picture can be adjusted by using the  buttons which will operate in the newsflash/subtitle page mode as well as in the MIX mode.

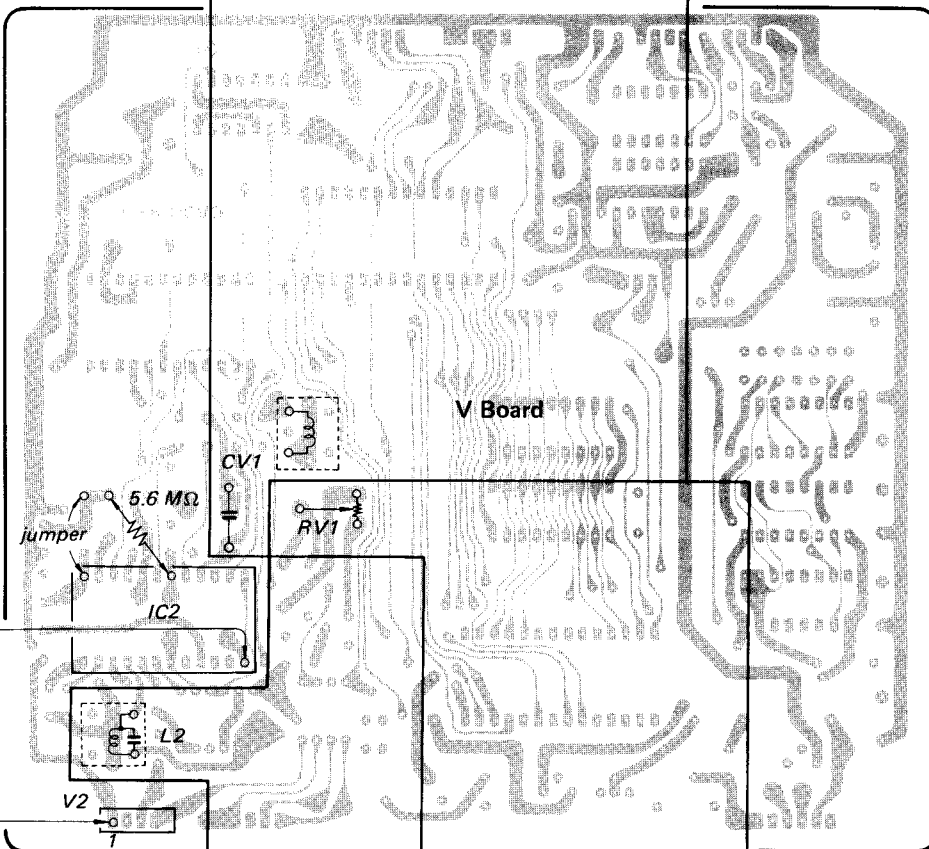
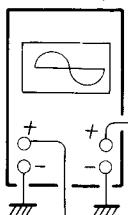
6-3. ADJUSTMENTS

V BOARD ADJUSTMENTS

6 MHz CLOCK

1. Tune in an off-air signal including the **TELETEXT** signal.
2. Press the **TEXT** button on the remote commander.
3. Confirm that the **P100** appears on the picture.
4. Connect a $5.6\text{ M}\Omega$ resistor and a jumper as shown during this adjustment.
5. Press the **MIX** button on the remote commander.
6. Adjust **CV1** so that the letter **P100** does not move horizontally.
7. If necessary, adjust **L1**.
8. After completing this adjustment, disconnect a $5.6\text{ M}\Omega$ resistor and a jumper.

dual-trace
oscilloscope

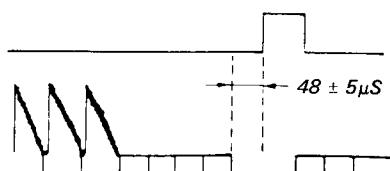


CLOCK PHASE

1. Tune in an off-air signal including the **TELETEXT** signal.
2. Press the **TEXT** button on the remote commander.
3. Adjust **L2** so that the title appears on the picture.
4. Adjust **L2** finely so that the error does not appear on other page.

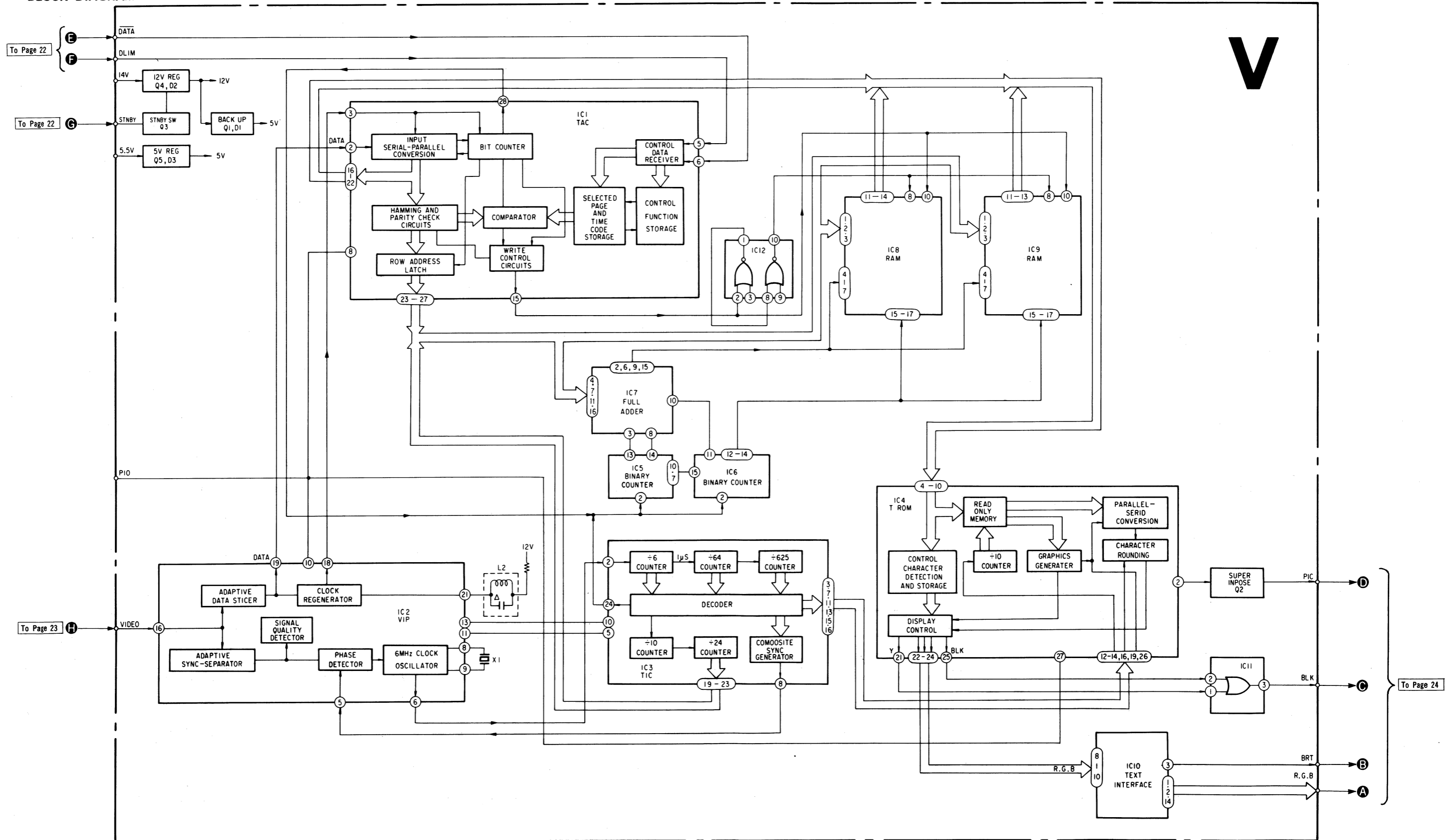
FIELD SYNC

1. Tune in an off-air signal.
2. Connect an dual-trace oscilloscope as shown.
3. Extend the vertical sync portion.
4. Adjust **RV1** to obtain the waveform on the oscilloscope as shown below.

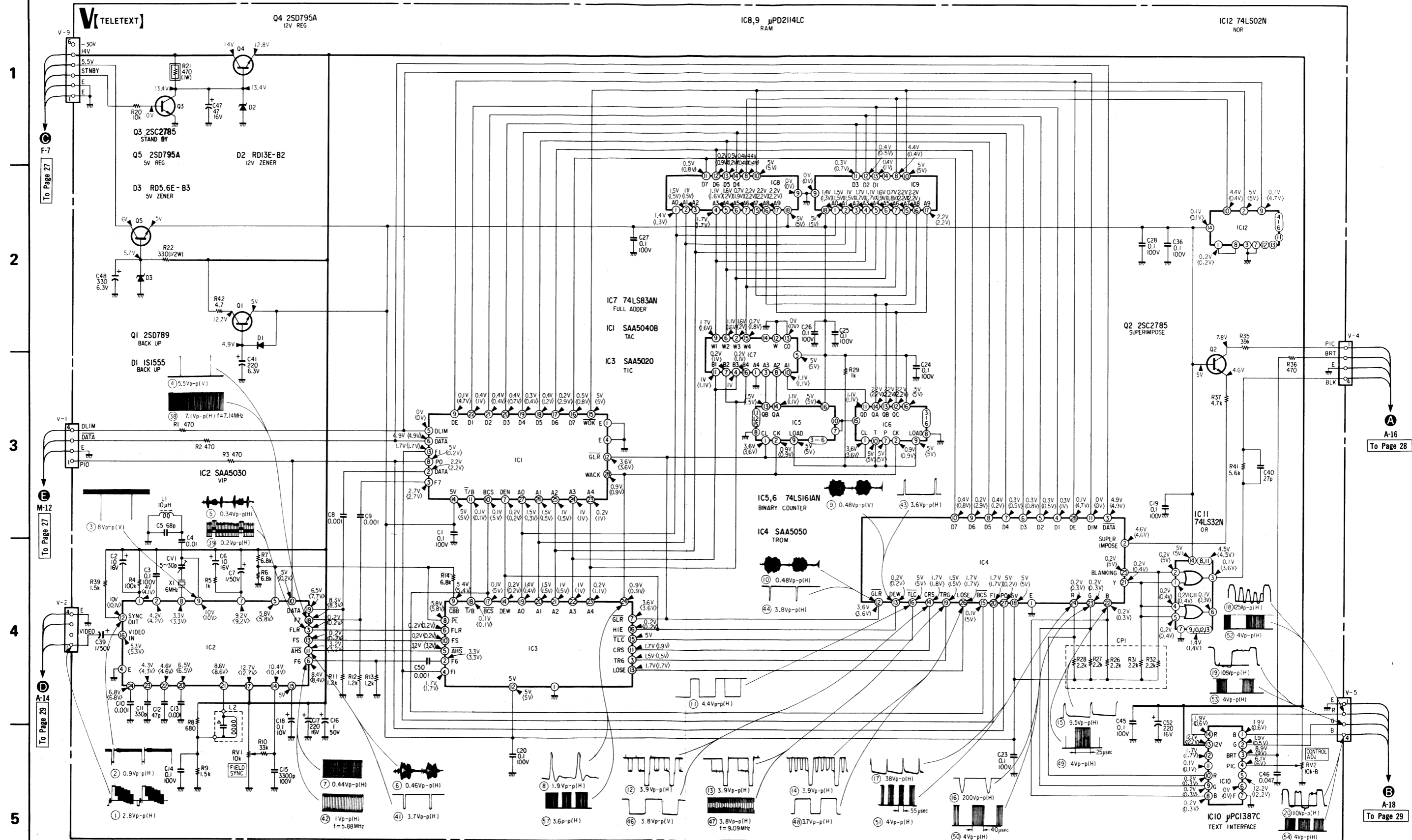


6-4. DIAGRAMS

BLOCK DIAGRAM



SCHEMATIC DIAGRAM

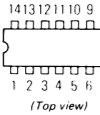


- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{4}$ W unless otherwise noted. k: 1000 Ω , M: 1000 k Ω .
- \square : nonflammable resistor.
- \triangle : internal component.

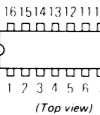
- \square : panel designation.
- \square : adjustment for repair.
- All voltages are in V.
- --- : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.

SEMICONDUCTORS

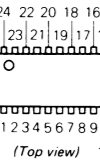
74LS02N
74LS32N
μPC1387C



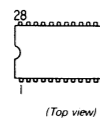
74LS161AN
74LS83AN



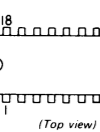
SAA5020
SAA5030



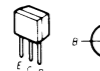
SAA5040
SAA5050



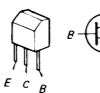
μPD2114LC



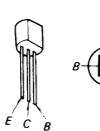
2SC2785



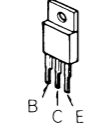
2SD774



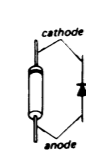
2SD789



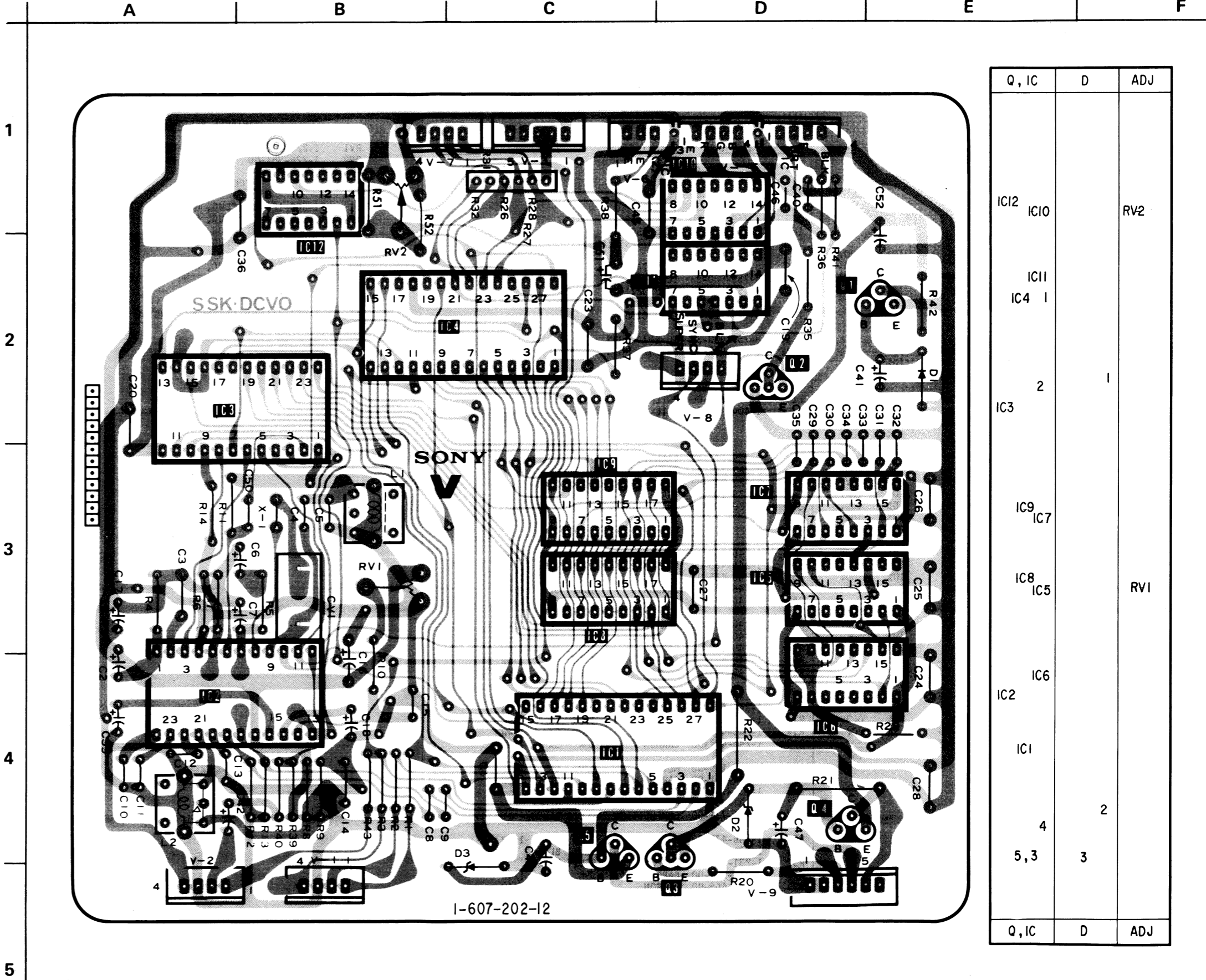
2SD795A



1S1555
RD5.6E-B3
RD13E-B2



PRINTED WIRING BOARD
— Conductor Side —



Q, IC	D	ADJ
IC12 IC10		RV2
IC11 IC4		
2	1	
IC3		
IC9 IC7		
IC8 IC5		RV1
IC6		
IC2		
IC1		
4	2	
5,3	3	
Q, IC	D	ADJ



6-5. ELECTRICAL PARTS LIST

NOTE:

When indicating parts by reference number, please include the board name.

• Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS

• MF : μ F, PF : μ PF

RESISTORS

• All resistors are in ohms
• F : nonflammable

COILS

• MMH : mH, UH : μ H

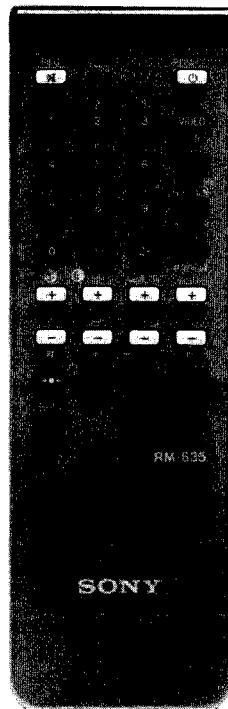
Ref.No.	Part No.	Description	Remark
▲	A-1295-572-A	SUB, V BOARD, COMPLETE *****	
▲	4-353-518-00	HEAT SINK	
CAPACITOR			
C1	1-108-389-00	MYLAR 0.1MF 10% 100V	
C2	1-123-356-00	ELECT 10MF 20% 16V	
C3	1-108-389-00	MYLAR 0.1MF 10% 100V	
C4	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C5	1-102-651-00	CERAMIC 68PF 5% 50V	
C6	1-123-356-00	ELECT 10MF 20% 16V	
C7	1-123-380-00	ELECT 1MF 20% 50V	
C8	1-102-074-00	CERAMIC 0.001MF 10% 50V	
C9	1-102-074-00	CERAMIC 0.001MF 10% 50V	
C10	1-102-074-00	CERAMIC 0.001MF 10% 50V	
C11	1-102-773-00	CERAMIC 330PF 5% 50V	
C12	1-101-984-00	CERAMIC 47PF 5% 50V	
C13	1-102-074-00	CERAMIC 0.001MF 10% 50V	
C14	1-108-389-00	MYLAR 0.1MF 10% 100V	
C15	1-129-794-00	FILM 0.0033MF 5% 100V	
C16	1-108-389-00	ELECT 0.1MF 10% 100V	
C17	1-123-321-00	ELECT 220MF 20% 16V	
C18	1-108-389-00	MYLAR 0.1MF 10% 100V	
C19	1-108-389-00	MYLAR 0.1MF 10% 100V	
C20	1-108-389-00	MYLAR 0.1MF 10% 100V	
C23	1-108-389-00	MYLAR 0.1MF 10% 100V	
C24	1-108-389-00	MYLAR 0.1MF 10% 100V	
C25	1-108-389-00	MYLAR 0.1MF 10% 100V	
C26	1-108-389-00	MYLAR 0.1MF 10% 100V	
C27	1-108-389-00	MYLAR 0.1MF 10% 100V	
C28	1-108-389-00	MYLAR 0.1MF 10% 100V	
C36	1-108-389-00	MYLAR 0.1MF 10% 100V	
C39	1-123-380-00	ELECT 1MF 20% 50V	
C40	1-102-961-00	CERAMIC 27PF 5% 50V	
C41	1-123-296-00	ELECT 220MF 20% 6.3V	
C45	1-108-389-00	MYLAR 0.1MF 10% 100V	
C46	1-101-006-00	CERAMIC 0.047MF 50V	
C47	1-123-332-00	ELECT 47MF 20% 16V	
C48	1-123-297-00	ELECT 330MF 20% 6.3V	
C50	1-102-074-00	CERAMIC 0.001MF 10% 50V	
C52	1-123-321-00	ELECT 220MF 20% 16V	
TRIMMER			
CV1	1-141-181-11	CAP, TRIMMER	
DIODE			
D1	8-719-911-19	DIODE 1SS119	
D2	8-719-100-68	DIODE RD13E-B2	
D3	8-719-100-36	DIODE RD5.6E-B3	

Ref.No.	Part No.	Description	Remark
IC			
IC1	8-759-950-40	IC SAA5040	
IC2	8-759-950-30	IC SAA5030	
IC3	8-759-950-20	IC SAA5020	
IC4	8-759-950-50	IC SAA5050	
IC5	8-759-901-61	IC SN74LS161AN	
IC6	8-759-901-61	IC SN74LS161AN	
IC7	8-759-900-83	IC SN74LS83AN	
IC8	8-759-121-10	IC UPD2114LC	
IC9	8-759-121-10	IC UPD2114LC	
IC10	8-759-113-87	IC UPC1387C	
IC11	8-759-900-32	IC SN74LS32N	
IC12	8-759-900-02	IC SN74LS02N	
COIL			
L1	1-404-291-00	COIL 10UH	
L2	1-404-292-00	COIL	
TRANSISTOR			
Q1	8-729-177-43	TRANSISTOR 2SD774	
Q2	8-729-245-83	TRANSISTOR 2SC2458	
Q3	8-729-245-83	TRANSISTOR 2SC2458	
Q4	8-729-109-53	TRANSISTOR 2SD795A	
Q5	8-729-109-53	TRANSISTOR 2SD795A	
RESISTOR			
R1	1-246-465-00	CARBON 470 5% 1/4W	
R2	1-246-465-00	CARBON 470 5% 1/4W	
R3	1-246-465-00	CARBON 470 5% 1/4W	
R4	1-246-521-00	CARBON 100K 5% 1/4W	
R5	1-246-473-00	CARBON 1K 5% 1/4W	
R6	1-246-493-00	CARBON 6.8K 5% 1/4W	
R7	1-246-493-00	CARBON 6.8K 5% 1/4W	
R8	1-246-469-00	CARBON 680 5% 1/4W	
R9	1-246-477-00	CARBON 1.5K 5% 1/4W	
R10	1-246-509-00	CARBON 33K 5% 1/4W	
R11	1-246-475-00	CARBON 1.2K 5% 1/4W	
R12	1-246-475-00	CARBON 1.2K 5% 1/4W	
R13	1-246-475-00	CARBON 1.2K 5% 1/4W	
R14	1-246-493-00	CARBON 6.8K 5% 1/4W	
R20	1-246-497-00	CARBON 10K 5% 1/4W	
R21	1-213-139-00	METAL 470 5% 1W F	
R22	1-244-861-00	CARBON 330 5% 1/2W	
R26	1-231-731-00	COMPOSITION CIRCUIT BLOCK	
R27	1-231-731-00	COMPOSITION CIRCUIT BLOCK	
R28	1-231-731-00	COMPOSITION CIRCUIT BLOCK	
R29	1-246-473-00	CARBON 1K 5% 1/4W	
R31	1-231-731-00	COMPOSITION CIRCUIT BLOCK	
R32	1-231-731-00	COMPOSITION CIRCUIT BLOCK	
R35	1-246-511-00	CARBON 39K 5% 1/4W	
R36	1-246-465-00	CARBON 470 5% 1/4W	
R37	1-246-489-00	CARBON 4.7K 5% 1/4W	

Ref.No.	Part No.	Description	Remark
R39	1-246-477-00	CARBON 1.5K 5% 1/4W	
R41	1-246-491-00	CARBON 5.6K 5% 1/4W	
R42	1-246-417-00	CARBON 4.7 5% 1/4W	
VARIABLE RESISTOR			
RV1	1-226-851-00	RES, ADJ, CARBON 10K	
RV2	1-226-851-00	RES, ADJ, CARBON 10K	
CONNECTOR			
V1	▲ 1-560-124-00	PLUG, CONNECTOR (2.5MM PITCH)	
V2	▲ 1-560-124-00	PLUG, CONNECTOR (2.5MM PITCH)	
V4	▲ 1-560-124-00	PLUG, CONNECTOR (2.5MM PITCH)	
V5	▲ 1-560-124-00	PLUG, CONNECTOR (2.5MM PITCH)	
V9	▲ 1-560-126-00	PLUG, CONNECTOR (2.5MM PITCH)	
CRYSTAL			
X1	1-527-734-00	VIBRATOR, CRYSTAL	

RM-635

SERVICE MANUAL



August, 1983

SPECIFICATIONS

Remote control system	Infrared control
Power requirements	3 V dc 2 IEC designation R03 batteries (size AAA)
Dimensions	Approx. 54 × 165 × 16 mm (w/h/d)
Weight	Approx. 100 g including batteries
Accessory supplied	IEC designation R03 battery (2)

REMOTE COMMANDER
SONY®

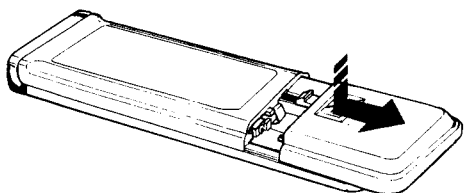
1. REMOTE CONTROL OPERATION

—with the supplied RM-635 Remote Commander

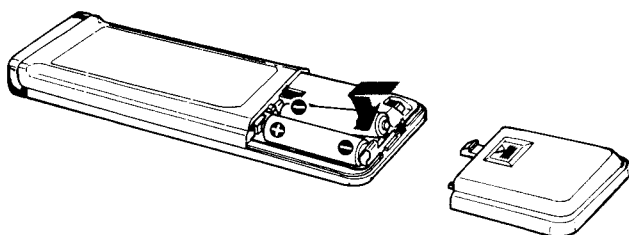
BATTERY INSTALLATION

The Sony RM-635 Remote Commander operates on two supplied IEC designation R03 batteries (size AAA).

- 1** Remove the battery compartment lid.



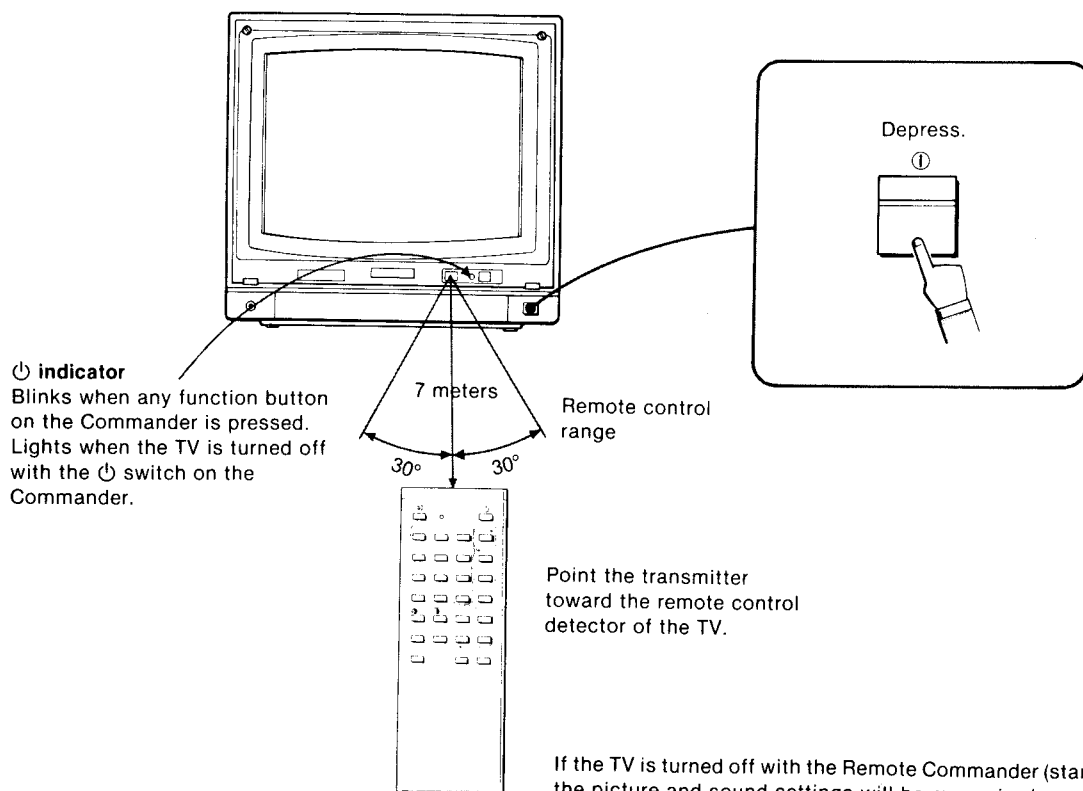
- 2** Insert batteries observing the correct polarity and close the lid.



NOTES ON THE REMOTE COMMANDER

- In normal use, battery life is up to half a year. When the batteries are exhausted, the Commander will not operate the TV properly. If this happens, replace both batteries with new ones.
- When the Commander is not used for a long period of time, remove the batteries to avoid damage from possible battery leakage.
- Keep the Commander away from extremely hot or humid places.
- Avoid dropping any foreign object into the cabinet, particularly when replacing batteries.

REMOTE TV OPERATION



If the TV is turned off with the Remote Commander (standby mode), the picture and sound settings will be memorized.
If the TV is turned off with the ⏻ switch on the TV, they will return to the levels fixed with the controls on the TV.

FUNCTION OF THE BUTTONS ON THE REMOTE COMMANDER

Each button has different functions for normal TV, teletext and VTR operations.

Functions for operating the TV are indicated in **WHITE**.

Functions for operating the video tape recorder* are indicated in **orange**.

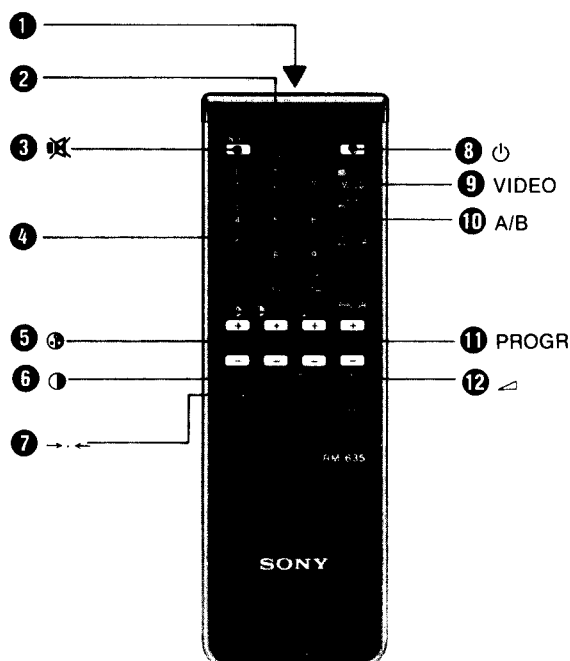
Functions for teletext operation using the optional OPK-103 teletext adaptor** are indicated in **green**.

*This Remote Commander can control the Sony SL-F1E combined with the TT-F1 series tuner timer unit, and Sony SL-C9 series.

**A teletext adaptor is built into the KV-2056EC.

For details, please refer to the supplemental instruction manual furnished with the set.

Buttons used for normal TV operations



❶ Transmitter

Point toward the remote control detector

❷ Pilot lamp

Blinks when the Remote Commander is operating.

❸ (sound mute) button

When you want to mute the sound, (to answer the telephone, for instance) press this button. To restore the sound, press this button again.

❹ Program number buttons

Programs are displayed by pressing the corresponding numbers. For programs 1 through 9, press the appropriate single-digit button. For programs 10 through 19, first press the **[1-]** button (the tens-digit " / " will blink on the program indicator), then the button corresponding to the last digit of the program number (the tens-digit will now stop blinking).

For example: for program 10, press **[1-]** and **[0]**.
for program 11, press **[1-]** and **[1]**.

For programs 20 to 29, press the **[2-]** button and then the single-digit button.

For program 30, press the **[0]** button.

Note: If you do not press a single-digit button within several seconds after pressing the **[1-]** or **[2-]** button, the previous program setting will be automatically recalled.

❺ (color) buttons

Adjust the color intensity. Press the **+** button to increase it, or press the **-** button to decrease it.

❻ (picture) buttons

Press the **+** button to increase the picture contrast, or the **-** button to decrease it.

❼ →← (normal) button

Pushing this button once instantly returns the color and contrast settings made with the **❶** and **❺** buttons on the Commander to the initial settings on the TV.

❽ (standby) switch

Turns the TV in standby mode. The **⏻** indicator on the TV will light up. To turn on the TV from the standby mode, press a program number button or the **→←** button on the Commander.

❾ VIDEO button

Functions the same as the TV/VIDEO select button on the TV.

❿ A/B button

Functions the same as the ZWEITON button on the TV.

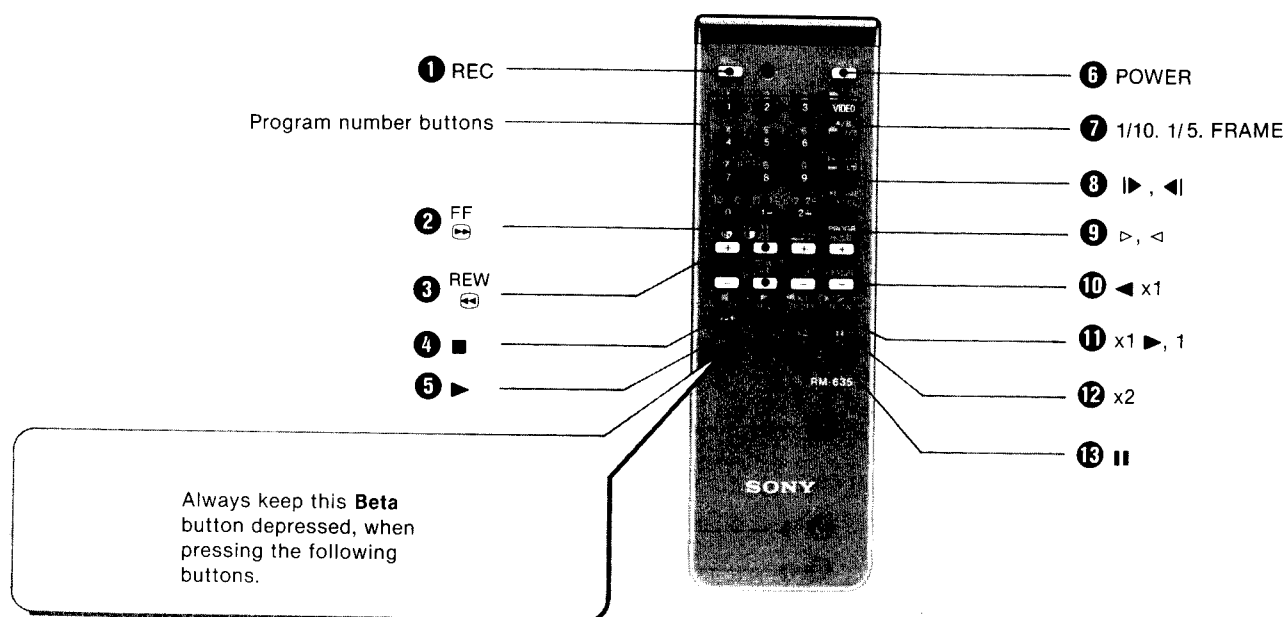
⓫ PROGR (program) buttons

Function the same as the PROGR select buttons on the TV.

⓬ (volume) buttons

Press the **+** button to increase the volume, or press the **-** button to decrease it.

Buttons used for VTR operations



Buttons which have the same functions for both SL-C9 series and SL-F1E

1 REC (record) button

Press to start recording.

2 FF (fast-forward) button

Press to advance the tape rapidly. This button is also used for the forward picture-search operation.

3 REW (rewind) button

Press to rewind the tape. This button is also used for the reverse picture-search operation.

4 ■ (stop) button

Press to stop the tape.

5 ► (play) button

Press to play the tape back.

6 POWER switch

Press to turn the video tape recorder (and the tuner timer unit) on or off.

12 x2 (double-speed) button

Functions the same as the x2 button on the video tape recorder. Press to obtain a double-speed playback picture.

13 || (pause) button

Functions the same as the || PAUSE button on the SL-C9 series and the PAUSE button on the SL-F1E. To release the pause mode, press this button again.

Buttons used for the SL-C9 series

7 Speed control buttons (1/10, 1/5, FRAME)

Function the same as the 1/10, 1/5 and FRAME of the SPEED CONTROL buttons on the recorder.

8 ► (forward) and ◀ (reverse) buttons

Select the direction of the speed control playback. Function the same as the ► and ◀ buttons of SPEED CONTROL buttons on the recorder.

11 1 (normal speed) button

Functions the same as the 1 button of the SPEED CONTROL buttons on the recorder.

Buttons used for the SL-F1E

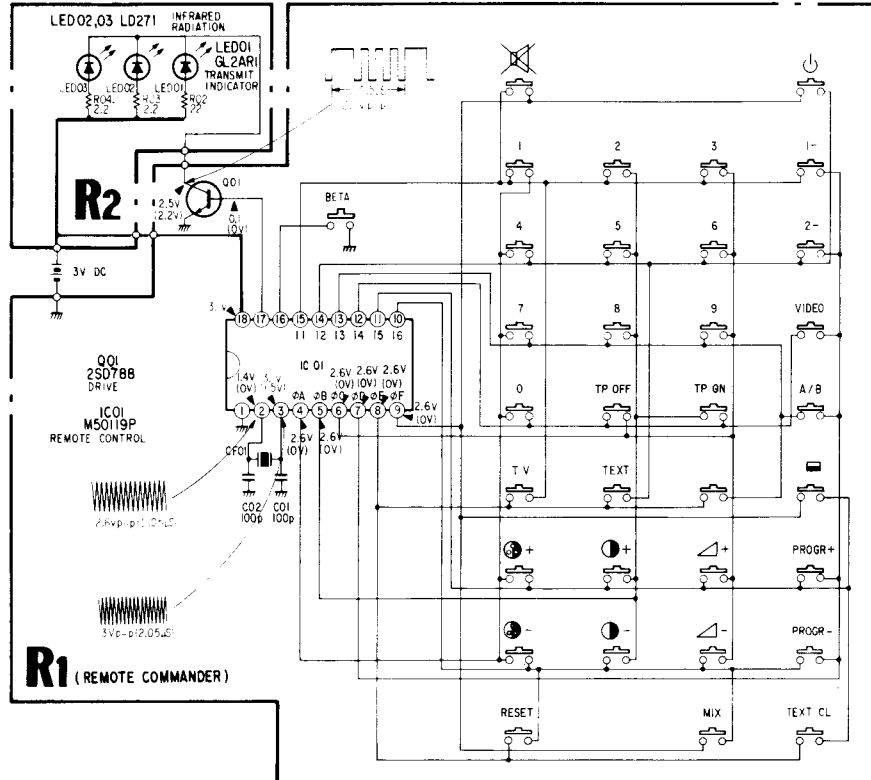
9 ►► (forward slow motion) and ◀◀ (reverse slow motion) buttons

Function the same as the ►► and ◀◀ SWING SEARCH buttons on the SL-F1E.

10 ◀ x1 (reverse) button and 11 x1 ► (forward) button

Function the same as the ◀ and ► SWING SEARCH buttons on the SL-F1E.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

[illegible]

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. k: 1000 Ω , M: 1000k Ω
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Voltages and waveform are for when A/B button is pressed.
- Voltages in () are taken with button not pressed.

R1

3. PRINTED WIRING BOARDS

— Conductor Side —

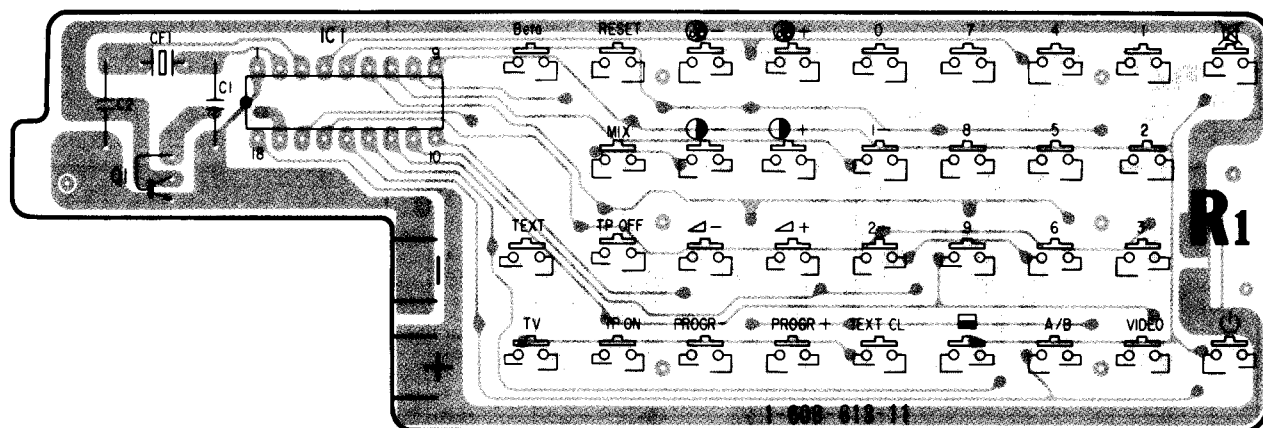
A

B

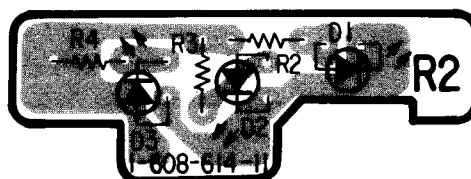
C

D

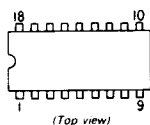
— R1 Board —



— R2 Board —



M50119P



2SC1474
2SD788



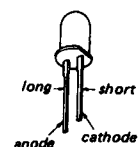
2SD773



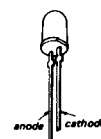
GL-2AR1



LD271



SE303A
SE303AX
SE303AY



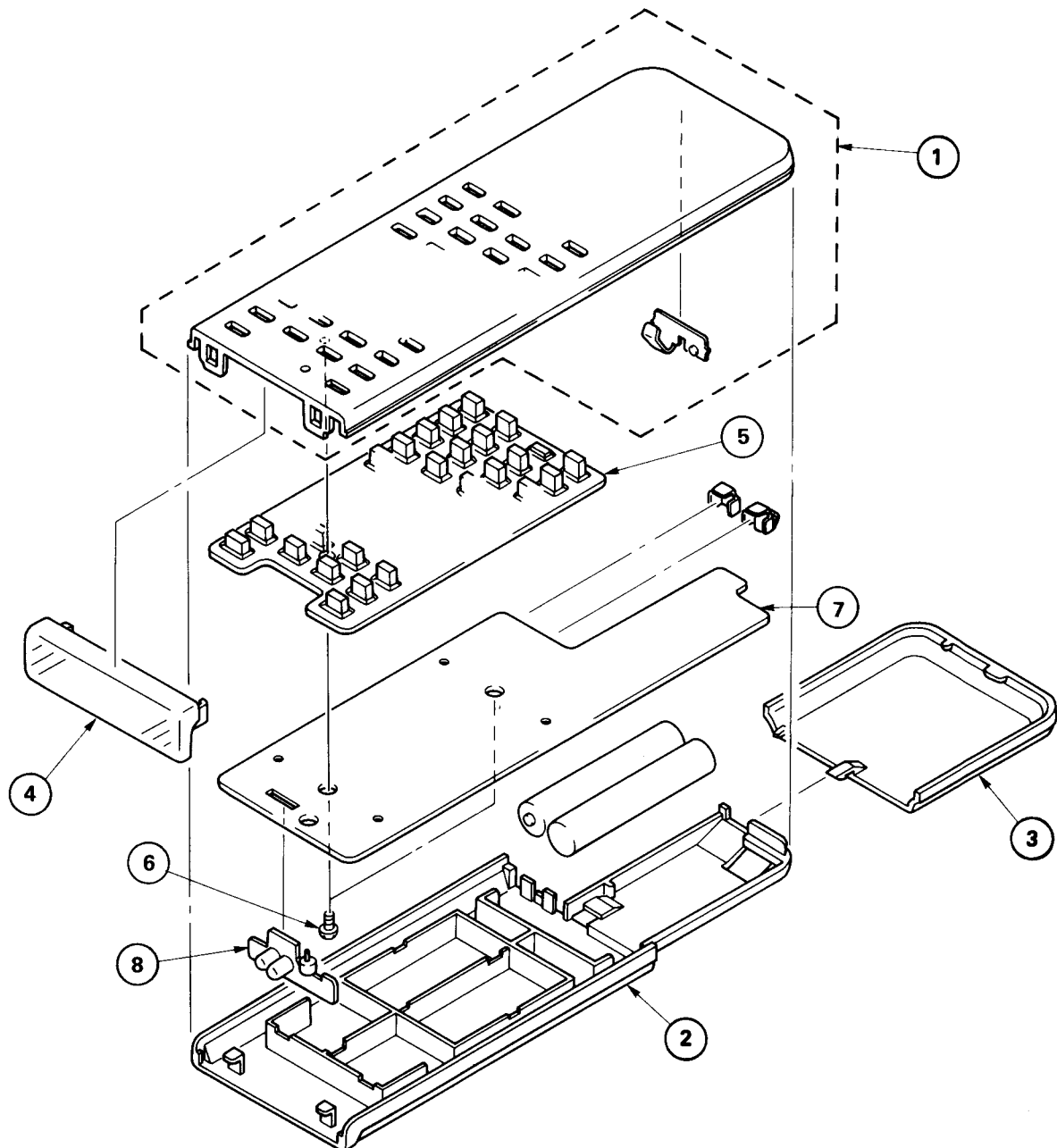
4. EXPLODED VIEW

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	X-4362-211-0	CASE (UPPER) ASSY, COMMANDER		5	4-361-944-21	SHEET, RUBBER	
2	4-361-948-00	CASE (LOWER), COMMANDER		6	4-356-741-00	SCREW, TAPPING (BIND 2X5)	
3	4-361-945-00	COVER, BATTERY		7	▲:1-608-613-00	R1 BOARD	
4	4-361-943-00	PANEL, FRONT, COMMANDER		8	▲:1-608-614-00	R2 BOARD	

R1**R2**

5. ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

• Items marked " **A** " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
• MF : μ F, PF : μ F

RESISTORS
• All resistors are in ohms
• F : nonflammable

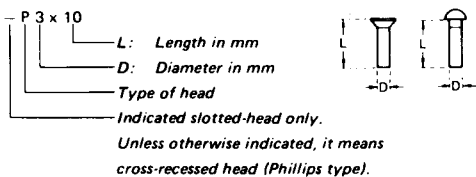
COILS
• MMH : mH, UH : μ H

Ref.No.	Part No.	Description	Remark
	A :1-608-613-00	R1 BOARD *****	
	4-348-542-00	TERMINAL (A), BATTERY	
	4-348-543-00	TERMINAL (B), BATTERY	
		<u>CAPACITOR</u>	
C01	1-161-271-00	CERAMIC 100PF 5% 50V	
C02	1-161-271-00	CERAMIC 100PF 5% 50V	
		<u>FILTER</u>	
CF01	1-527-476-00	OSCILLATOR, CERAMIC	
		<u>IC</u>	
IC01	8-759-600-07	IC M50119P	
		<u>TRANSISTOR</u>	
Q01	8-729-177-32	TRANSISTOR 2SD773	

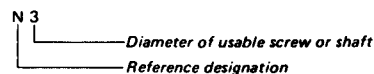
	A :1-608-614-00	R2 BOARD *****	
		<u>DIODE</u>	
LED01	8-719-900-23	DIODE GL2AR1	
LED02	8-719-107-82	DIODE SE303AY	
LED03	8-719-107-82	DIODE SE303AY	
		<u>RESISTOR</u>	
R02	1-247-791-00	CARBON 22 5% 1/6W	
R03	1-247-767-00	CARBON 2.2 5% 1/6W	
R04	1-247-767-00	CARBON 2.2 5% 1/6W	













HARDWARE NOMENCLATURE














Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	